

PLAN OF MANAGEMENT 2021 - 2025



WARDDEKEN
INDIGENOUS
PROTECTED
AREA

BOLKNAHNNAN KUNRED

NGARRIDJARRKBOLKNAHNNAN KUNRED

NGARRIDJARRKBOLKNAHNNAN KUNRED

LOOKING AFTER COUNTRY TOGETHER

LOOKING AFTER COUNTRY TOGETHER

LOOKING AFTER COUNTRY TOGETHER

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Warning

This plan contains images, names and references of deceased Indigenous Australians.

Written by

Alys Stevens and Georgia Vallance based on consultations with Nawarddeken people and Warddeken Land Management Limited members.

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Plan of Management 2021-2025.

Our Logo

Our logo was created in 2007 when Warddeken Land Management Limited was incorporated as a not-for-profit company. The kabidbimyo (hand stencil) at the centre of the logo is the hand of the company's founder and patron, Bardayal Lofty Nadjamerrek AO (Wamud Namok 1926–2009). It reminds us that it was his guiding hand that led the land management movement in the stone country and we wear it with pride.



PLAN OF MANAGEMENT 2021 - 2025

BOLKNAHMAN KUNRED
NGARRIDJARRKBOLKNAHMAN KUNRED

NGARRIDJARRKBOLKNAHMAN KUNRED

LOOKING AFTER COUNTRY TOGETHER

LOOKING AFTER COUNTRY TOGETHER



OUR VISION

**Ngarridjare ngarrinan kamak bininj
ngarridurrkmirri kondah kamak
kunred kore kuwarddewardde.**

**Ngarridjare ngarrimarnbun kunred
ngarrikurrme kunbid bolkkime
dja yerrikah.**

Our vision is to have healthy people
living and working on our healthy country
in the kuwarddewardde.

We want the management of our country
to be in our hands now and into the future.



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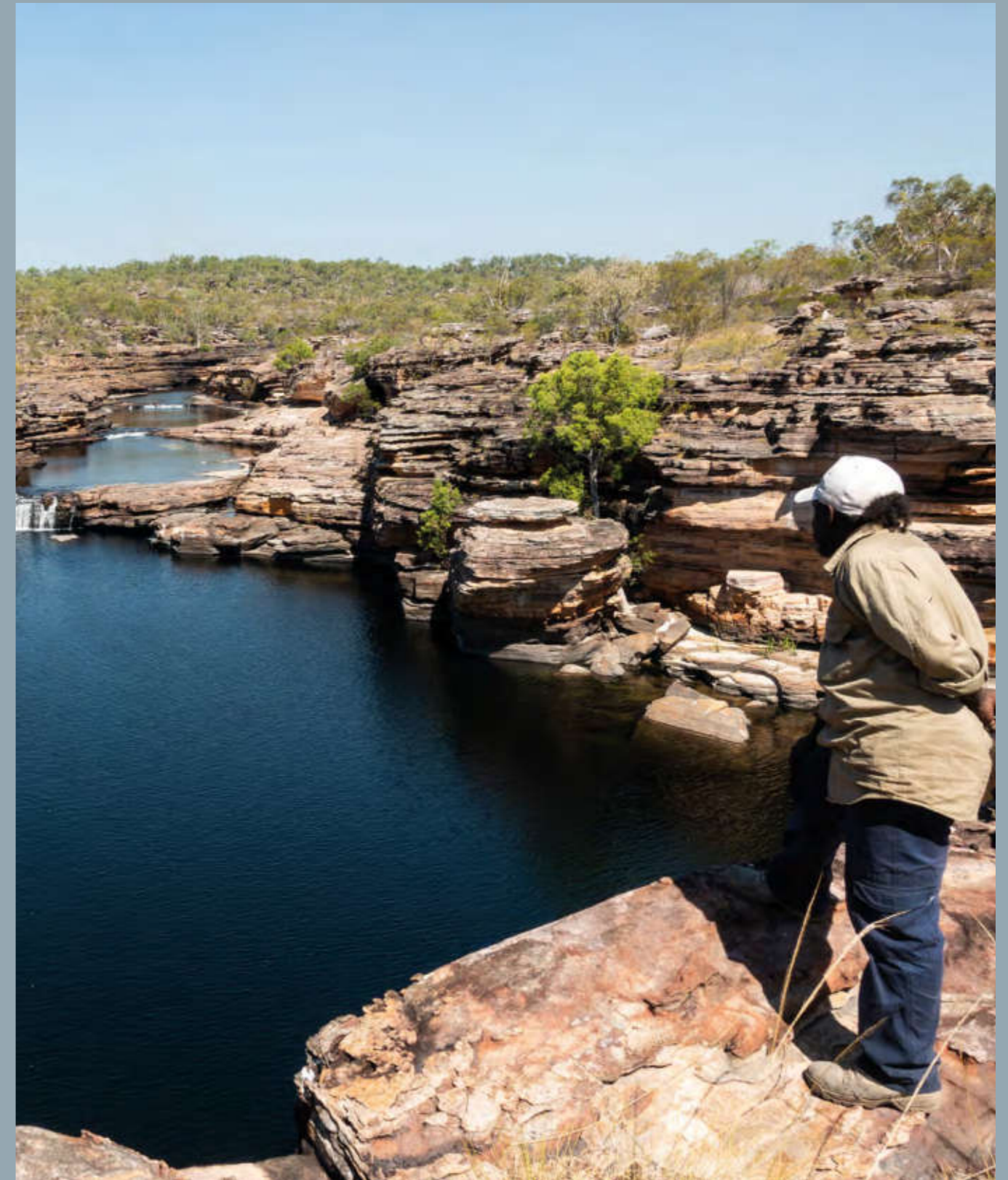
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‘When our way of thinking, our ideas and practices go into the plan of management, then that is enlightening for us because this is what our old people, our ancestors have left for us.

We will understand how to look after this country. We don’t want to only follow new ways that are foreign to us, no. We want to do what our old people have done before us because this is their legacy to us.

Together with non-Aboriginal culture, the two ways can go into the plan of management. That way, there will be understanding.’

— Rodney Naborlhborlh



DEDICATION TO NAWARDDEKEN PROFESSORS



Bardayal Lofty Nadjamerrek AO
1926-2009



Jimmy Kalariya Namarnyilk
1934-2012



Peter Nabarlambarl Billis
1935-2012



Jack Djandjomerr
1945-2014



Ruby Bilidja
1930-2014



Mary Kolkiwarra Nadjamerrek



Josie Maralngurra



Lillian Guymala



Wurdib Nabulwad

The most senior Nawarddeken hold unequalled knowledge about our home, the kuwarddewardde. Their depth of knowledge and willingness to share and teach has led us to acknowledge them as our professors.

It was their passion that led to the establishment of our company Warddeken Land Management Limited. They wanted to make sure Nawarddeken could continue to look after the kuwarddewardde for generations to come.

The wisdom and foresight of our professors set us on the path we follow today as we continue to look after the kuwarddewardde, the country they loved so much. We carry them in our hearts and it is their vision guiding us into the future.

This plan is dedicated to these professors, those we still have with us and those whose spirits have returned home to the stone country.



Leanne Guymala



Molly Nayilibidj
1950-2021



Leonie Guymala
1938-2014



Timothy Nadjowh AM
1923-2017



Jacob Nayinggul
1943-2012



Djawida Nadjongorle
1933-2012



Mary Naborlhborlh
1930-2012



Berribob Dangbungala Watson



Deborah Nabarlambarl

THE WARDDEKEN STORY

THE WARDDEKEN STORY

THE WARDDEKEN STORY

The kuwarddewardde (Arnhem Land Plateau) is the home of Bininj Nawarddeken. Its sandstone escarpments, gorges, rivers, waterfalls, savannah woodlands, rainforests and wetlands were placed there by **nayuhyungi** (first people), **Nakorroko** (father and son hero ancestors), **Ngalyod** (rainbow serpent) and other creation ancestors. This living cultural landscape has been cared for and managed by Nawarddeken for thousands of generations. Warddeken Land Management is continuing this practice through our work as rangers, caring for the Warddeken Indigenous Protected Area (IPA).



At the heart of Warddeken’s story are Bininj, the Nawarddeken people of the kuwarddewardde. Our story is of Bininj returning to country to care for kunbolkngeykimukken (individual clan estates), of reconnecting with a rich cultural inheritance, and of preserving unique knowledge, skills and languages.

It is a story of looking after country, drawing upon customary and contemporary management practices to safeguard the health of the kuwarddewardde. Most importantly, the Warddeken story is about building a sustainable future on country for our people.

Nawarddeken have always been part of a living landscape, and bininj presence is integral to the health of the kuwarddewardde through the performance of management practices encompassing the spiritual, religious and pragmatic. Since time immemorial, family groups walked and camped throughout the kuwarddewardde, undertaking fine scale burning in the early dry season and seeking shelter in the rocks in the wet. Message sticks were sent across the kuwarddewardde inviting neighbouring clans to

come together for hunting and fishing events. Djungkay (ceremonial managers by matrilineal inheritance) performed and oversaw ceremonies to encourage regeneration of food plants and the proliferation of animal species. Senior landowners frequently visited djang (sacred sites) and other places of cultural import, to show respect to ancestors and creator spirits, and to perform requisite rituals.

The kuwarddewardde remains the home of Nawarddeken people, and today is also home to Warddeken Land Management’s three ranger bases. However, this has not always been the case, and for many long years the stone country was devoid of people.



With the arrival of balanda (Europeans), Nawarddeken began to leave the kuwarddewardde, lured by Christian and government missions, opportunities to work in the mining and buffalo industries, and the appeal of larger settlements such as Gunbalanya and Maningrida. By the late 1960s, the kuwarddewardde was largely depopulated. Nawarddeken elders considered the country orphaned and despaired for its future.

For the next 30 years, our old people – the Warddeken professors - saw and felt the devastation of large wildfires and an increasing number of feral animals impacting the physical and cultural landscape.

Their deep concern was matched by a desire and motivation to return to country, to once again look after the kuwarddewardde and hand down their skills and knowledge to younger generations. In the early 1970s, our visionary leader, the venerable Bardayal Lofty Nadjamerrek AO, began the long process of bringing Nawarddeken back to their homeland communities, working tirelessly for the next twenty years to reconnect country and people. Finally, in 2002, Bardayal moved back permanently to his own country

on Mankungdjang estate (native honey dreaming) at Kabulwarnamyo, where he worked alongside other bininj leaders and committed balanda friends to establish the Manwurrk Ranger program, which allowed landowners for the first time to make a living on country.

The Manwurrk Ranger program transitioned to the Warddeken Rangers in 2007, when we registered our company Warddeken Land Management. Since then, Warddeken has experienced steady growth to become a large organisation working across multiple bases, employing more than 200 Nawarddeken landowners annually, and consistently delivering world-class cultural and land management programs.



WARDDEKEN INDIGENOUS PROTECTED AREA

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WARDDEKEN INDIGENOUS PROTECTED AREA

The commitment of our professors to see the kuwarddewardde cared for and managed into the future led to the declaration of the Warddeken Indigenous Protected Area (IPA) on 24th September 2009. The Warddeken IPA encompasses 14,000 km2 of the kuwarddewardde in west Arnhem Land, Northern Territory, bordering Kakadu National Park to the west, and overlapping with the Djelk IPA in the north and the proposed Mimal IPA in the south. Since the IPAs establishment, more than 300 indigenous people have worked with Warddeken in environmental and cultural programs to conserve and protect the kuwarddewardde.



The Warddeken IPA is home to hundreds of endemic species and a host of threatened flora and fauna, including iconic and culturally important species such as djabbo (northern quoll), barrk (black wallaroo), mulbbu (Arnhem Land rock-rat), alyurr (Leichhardt's grasshopper), yirlinkirrkirr (white-throated grasswren) and nawaran (Oenpelli python).

The IPA also incorporates the headwaters of numerous major river systems including the Liverpool,

Mann, East Alligator, Katherine and Goomadeer rivers, and part of the South Alligator River catchment.

The Warddeken IPA includes the kunbolkngeykimuk (individual clan estates) of 36 clan groups, which are divided into four wards for governance and management purposes.

Clan groups of the IPA are intrinsically linked by the interconnectedness of the geological, ecological and mythological storyscape of the kuwarddewardde.



CLAN GROUPS

Kakbi (north)

Warddjak (Maburrinj)
 Ngalngbali (Kudjekbinj)
 Yurlhmanj (Djalbangurrk)
 Madjawarr (Kunukdi)
 Marrirn (Kumarrirrbang)
 Wurrik (Mandedjkadjang)
 Mayirrkulidj (Djurlka)
 Durlmangkarr (Kudjaborrng/Kunburray)
 Djok (Ngolwarr)
 Barrbinj (Kumarrirrbang/Kudjaldordo)

Karrikad (west)

Manilakarr Urningangk (Mikkinj)
 Maddalk (Kumalabukka)
 Warddjak/Worrkorl (Balmana from Kundjikurdubuk)
 Bolmo (Djedjrungi and Dordokiyu)
 Badmardi (Balawurru, succession/caretaking)
 Wurnkomku (Nawoberr)
 Danek (Kudjumarndi)

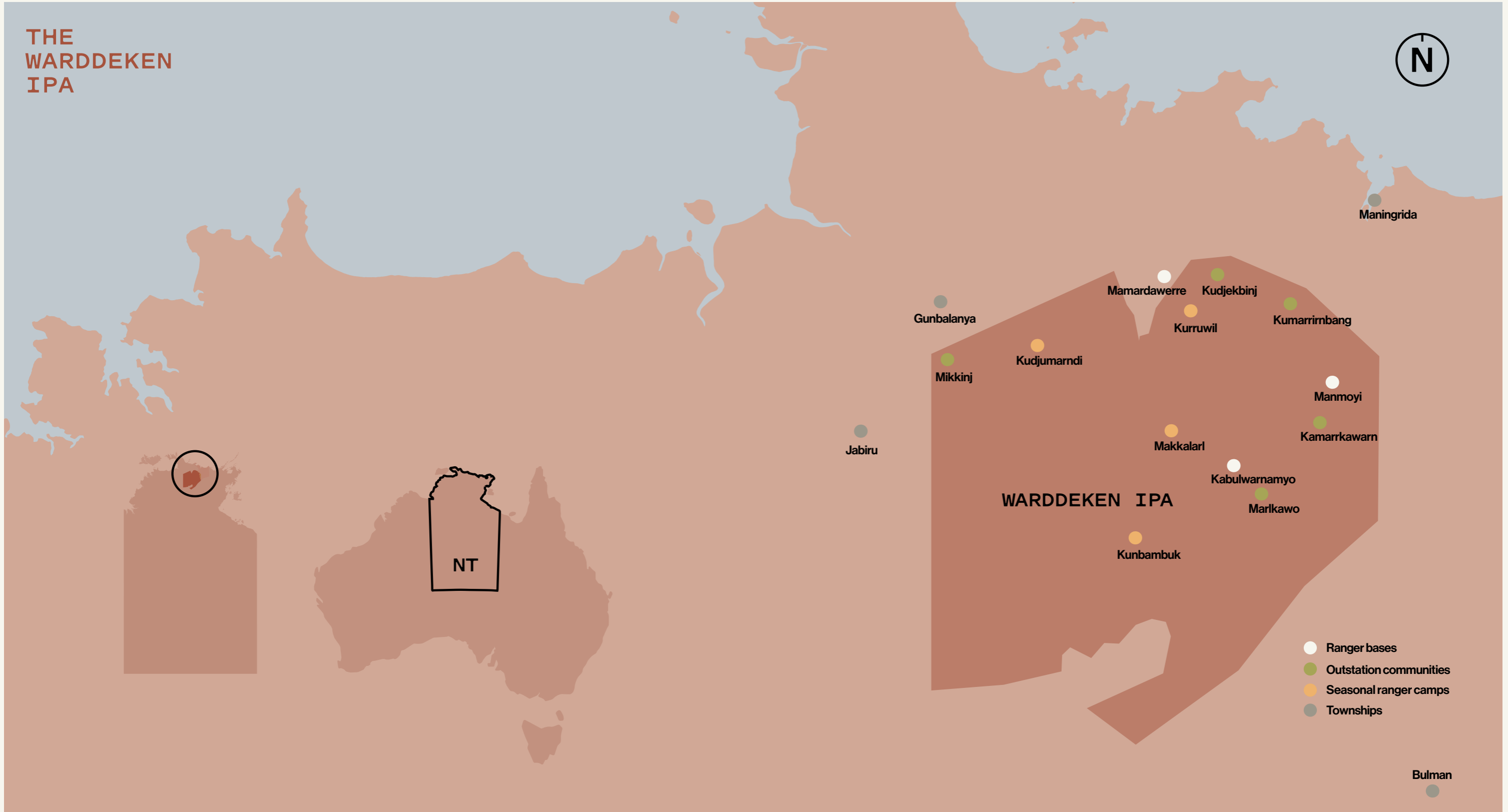
Walem (south)

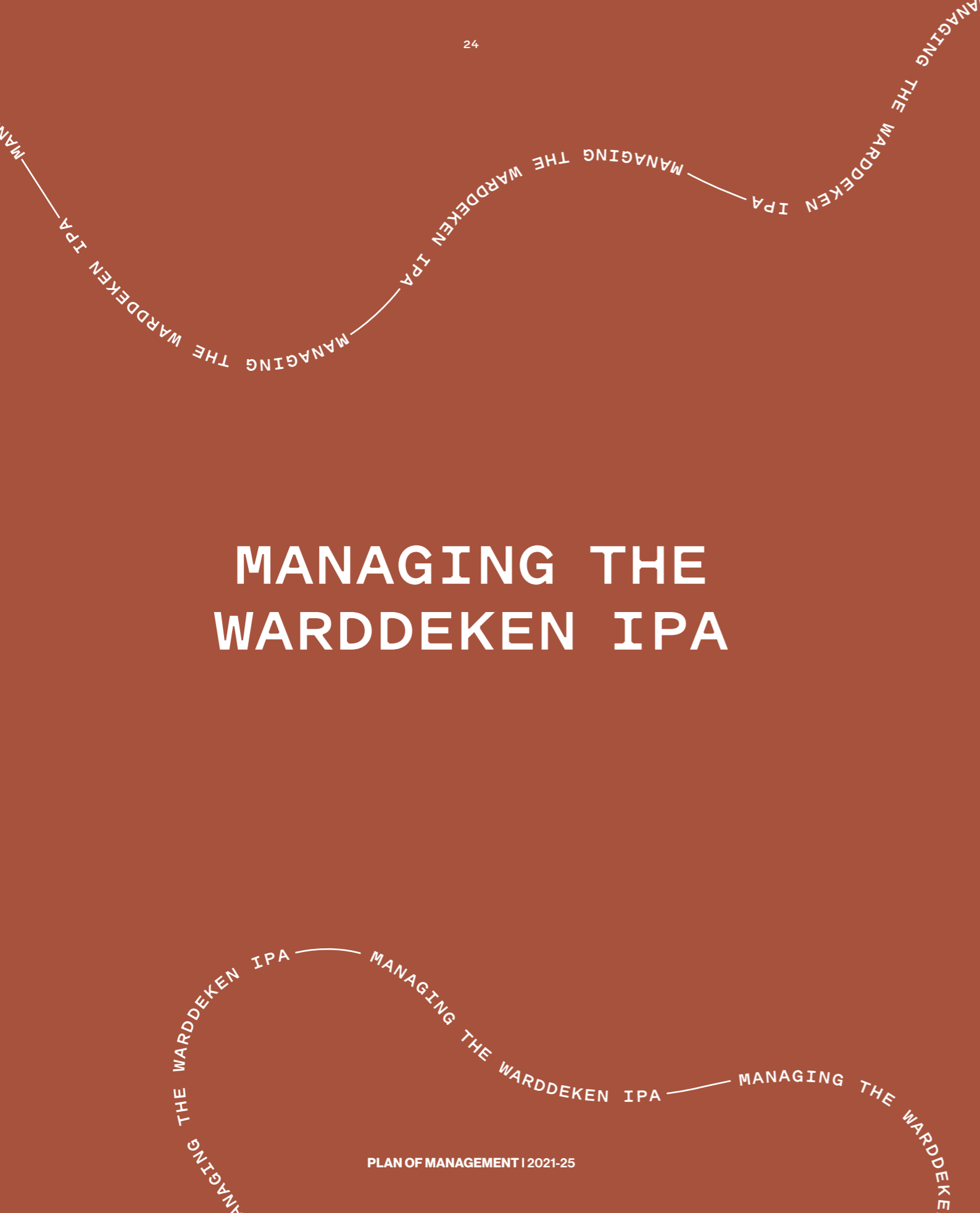
Djorroram (Bamo)
 Murruba (Morre)
 Karnbirr (Djohmi)
 Mimbilawuy (Karlngarr)
 Barabba (Mimbrung)
 Mandjawarlwarl (Bobbolinjmarr)
 Bolmo (Marlkawo)
 Barradj (Yanjokobarnem, succession/caretaking)
 Buluwunwun (Walangandjang)
 Bulumo (Makkebowan)

Koyek (east)

Bordoh (Ngorlkwarre)
 Mok/Berdberd (Ankung Djang/Ngalkombarli)
 Yamarr (Kidbulmaniyimarra)
 Kulmarru (Kubumi)
 Rol (Bolkngok)
 Djordi/Djorroram (Kodwalewale)
 Wurrbbarn (Nabrang)
 Warridjingu (Boburk)

THE WARDDEKEN IPA





MANAGING THE WARDDEKEN IPA

The Warddeken IPA is managed by Nawarddeken landowners with the support of Warddeken Land Management Limited. Our company has more than 420 registered Nawarddeken members, and is governed by an entirely Indigenous Board of Directors derived from this membership base. Triennially, three board members are elected for each ward of the Warddeken IPA: Kakbi (north), Karrikad (west), Walem (south) and Koyek (east).

The repopulation of the kuwarddewardde and the establishment of multiple ranger bases has steadily empowered Nawarddeken to care for and manage country. Since establishing the IPA in 2009, more than 300 indigenous people have worked with Warddeken in environmental and cultural programs that conserve and protect the kuwarddewardde. Warddeken operates from three remote ranger bases – Kabulwarnamyo (established 2004) and Manmoyi (established 2012) in the Koyek ward of the IPA, and Mamardawerre

(established 2018) in Kakbi ward. Multiple ranger bases are vital to ensuring our work programs address management issues right across the IPA.

The Warddeken IPA is managed in accordance with the current management plan, which acts as a roadmap outlining what Traditional Owners want to see the company achieve over a five-year period. This is the third management plan, and it builds on the good work of the previous two plans.



PREVIOUS MANAGEMENT PLANS

2009-2015 PLAN OF MANAGEMENT

Warddeken's first management plan was written in preparation for the declaration of the Warddeken IPA, and included a lot of background information about the kuwarddewardde and Nawarddeken people, as well as a range of objectives to work towards. It was a good starting point, but we acknowledge that there were not enough bininj involved in the planning process; something we rectified in the formulation of the next plan.

There were many major achievements under this plan, with the period of time characterised by growth from a small ranger group based only at Kabulwarnamyo, to a bigger and more ambitious company aiming to help Traditional Owners at more communities across the IPA.

SOME OF THE KEY ACHIEVEMENTS UNDER THE 2009-2015 PLAN:

- Established Manmoyi ranger base
- Built a network of tracks across the IPA
- Built remote ranger bases at Kurruwil, Makkalarl and Kudjumarndi
- Established Karrkad Kanjdji Trust
- Commenced annual Anbinink protection program
- Commenced annual aerial culling program

2016-2020 PLAN OF MANAGEMENT

Warddeken's 2016-2020 Plan of Management was developed over a two-year period in consultation with over 200 Nawarddeken Traditional Owners, using a Healthy Country Planning process, under the guidance of the Board of Directors and senior cultural advisors. This guaranteed that the plan was representative of the aspirations of bininj for their culture and country, and ensured that the structure of the document could be carried into future management plans.

The 2016-2020 Plan of Management was critical in guiding the expansion of ranger work programs over a period of significant growth for Warddeken. It also formed the basis for the establishment and securing of philanthropic funding of ambitious new cultural and ecological projects, and drove the production of more detailed sub-plans.

SOME OF THE KEY ACHIEVEMENTS UNDER THE 2016-2020 PLAN:

- Established Mamardawerre ranger base
- Commenced the Daluk Ranger Program
- Commenced the IPA-wide Mayh Species Recovery Program
- Commenced the IPA-wide Kunwarddebim (Rock art) Program
- Maintained a gentle fire regime across the IPA in the face of increasing wildfire prevalence
- Established and gained independent school registration for Nawarddeken Academy
- Established the Wakadjaka Monitoring and Evaluation Subcommittee

We are incredibly proud of the growth of our company and our work programs over the life of the previous plan.



MONITORING AND EVALUATION

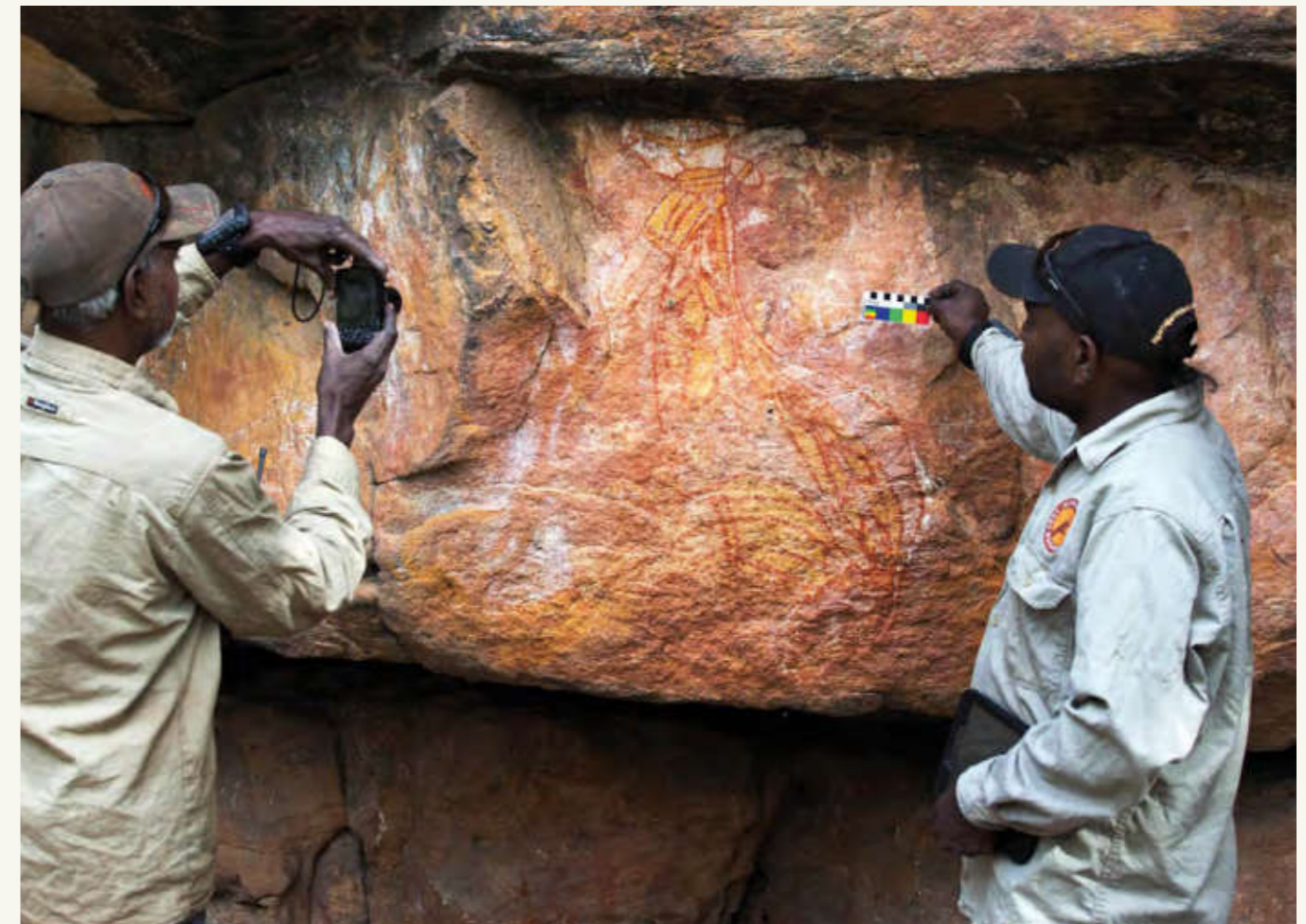
MONITORING AND EVALUATION

MONITORING AND EVALUATION

It is essential to regularly monitor and evaluate our progress against the sociocultural and ecological assets, threats, and strategies outlined in the Plan of Management. To allow us to do this effectively, we have developed robust monitoring and evaluation procedures, including establishing an expert subcommittee and employing a monitoring officer.

Ensuring monitoring and evaluation is an integral part of our operations has provided us with the information necessary to confidently review our achievements against the 2016-2020 Plan, and based on this, make necessary changes and updates to the 2021-2025 Plan.

Importantly, we have ensured that our monitoring and evaluation processes give equal weight to bininj observations and qualitative assessments of cultural and social change, alongside scientific and data-based analysis.



THE WAKADJAKA SUBCOMMITTEE

Established in 2018, the Warddeken Kananan dja mak Karrmorokme (Wakadjaka) Subcommittee has the important role of evaluating Warddeken's progress towards achieving the vision articulated in the Plan of Management. The Wakadjaka Subcommittee is comprised of one board member from each of the four wards of the IPA and four Nawarddeken experts.

The Wakadjaka Subcommittee reports and makes recommendations to the Warddeken Board on:

1. If the Plan of Management is being used in the management of the Warddeken IPA
2. If the Plan of Management is working
3. If the two toolboxes of customary and western knowledge and practice are being used
4. How to report on the above 1-3 so that the Board, Warddeken members and other parties understand what has been achieved
5. Priorities for action to address issues that arise from 1-3.

REVIEW OF 2016-2020 PLAN OF MANAGEMENT

Prior to commencing the development of this new plan, a comprehensive review of the 2016-2020 plan was undertaken by the monitoring officer and Wakadjaka Subcommittee, assessing Warddeken's achievements. To review the plan in its entirety, a range of qualitative and quantitative datasets were used, including:

- Landowner satisfaction surveys conducted as semi-structured interviews on country. Bininj Kunmayali (knowledge) is integral in all aspects of our plan and senior knowledge holders are the only people who can make an assessment of where we stand today and where we need to go. Members from all wards of the IPA were interviewed with key questions developed in Bininj Kunwok by the Wakadjaka. The surveys provided a detailed assessment on our

status and achievements under the previous plan as well as a bounty of information that will continue to be used throughout the operationalisation of this incoming plan.

- Ecological data such as fire frequency maps, biodiversity survey results and weed distribution.
- Operational reports such as anbinik management, feral animal cull data, cultural activities such as bushwalks/camps and rock art surveys.
- Employment and social data related to employment, population and company governance.

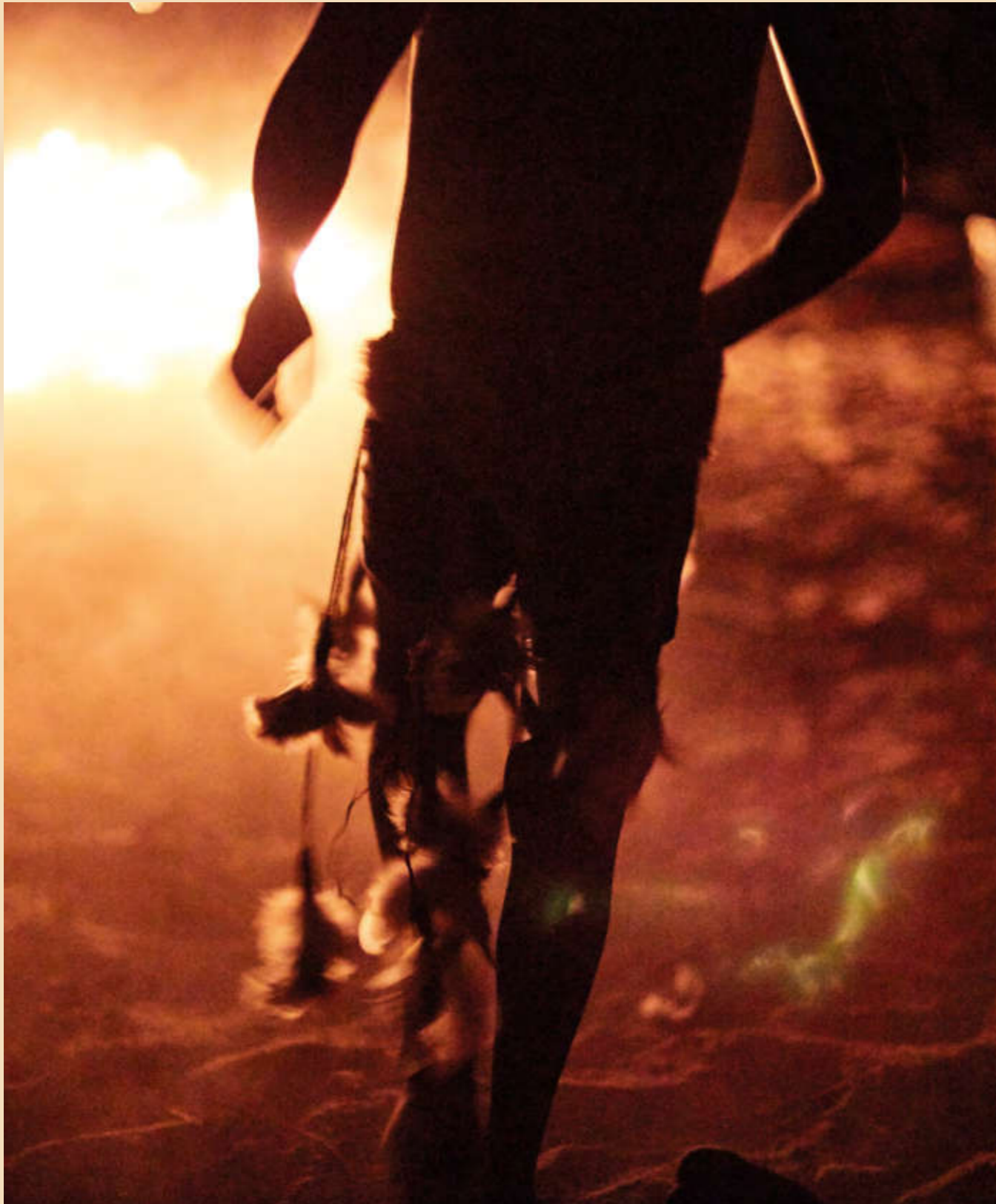
The review demonstrated incredible achievements by Warddeken over the 2016-2020 period, as well as identifying our priorities for the next plan. The review was the most wide-ranging, detailed and collaborative review of our programs that Warddeken has undertaken since the IPA was established. The evidence generated has provided not only a clear-sighted assessment of our progress, but also an illuminated understanding of the areas we need to devote more time and resources towards in this next iteration of our Plan of Management.

DEVELOPING THE 2021-2025 PLAN OF MANAGEMENT

Our new plan is informed by the work of the Wakadjaka Subcommittee and the results of the review process described above. Developing this plan has involved revisiting each step of the Healthy Country Planning process, reviewing and updating asset health indicators, threat rankings, goals, actions and strategies as required.

In many ways the new and outgoing plans are similar because our vision for country has not changed. Creating the previous plan involved over 200 Warddeken members defining what healthy country means to Bininj, the results of which became the assets under which our efforts are organised and understood. This huge intellectual contribution by Nawarddeken Traditional Owners resulted in a structure that remains as relevant now as it was then, providing for smooth continuity to this next plan.





‘There are some kinds of Aboriginal knowledge which balanda will not see as consistent with western science. Our old people sang morrdjdjanjno songs to make sure that various animal species remained prolific and in healthy populations. Now we no longer sing morrdjdjanjno songs.

We need to learn these songs again and sing them as part of the way we incorporate bininj knowledge into land management. This brings cultural and natural domains together. The old people did this. The morrdjdjanjno songs are no longer sung; we believe that this can contribute to the demise of animal populations.’

— Terrah Diliyang Guymala

PLANNING KUNWOK

THE LANGUAGE OF PLANNING



There are concepts and language in this management plan that may be unfamiliar to Nawarddeken landowners. In an effort to improve our communication of this plan with our members, some important words have been translated into Kunwinjku so that these words can become our own.

The translations were made by the Wakadjaka Monitoring and Evaluation Subcommittee.

KEY WORDS

Njalehnjale Ngarrinahn

An asset is essential to achieving our vision and is something Warddeken is working to protect.

ASSET

Nabang Kabolkwarrewon

A threat is something that is harming our assets, and we work to bring them down.

THREAT

Manbuybuyika Karridurrkmirri

Includes all the jobs we do as rangers, working towards protecting assets and reducing threats. Many strategies are needed.

STRATEGIES

MANAGEMENT PATHWAY TO REACHING OUR VISION

**Boyenkah manbuybuyika
karridurrkmirri njaleken**

Every day we do many jobs because

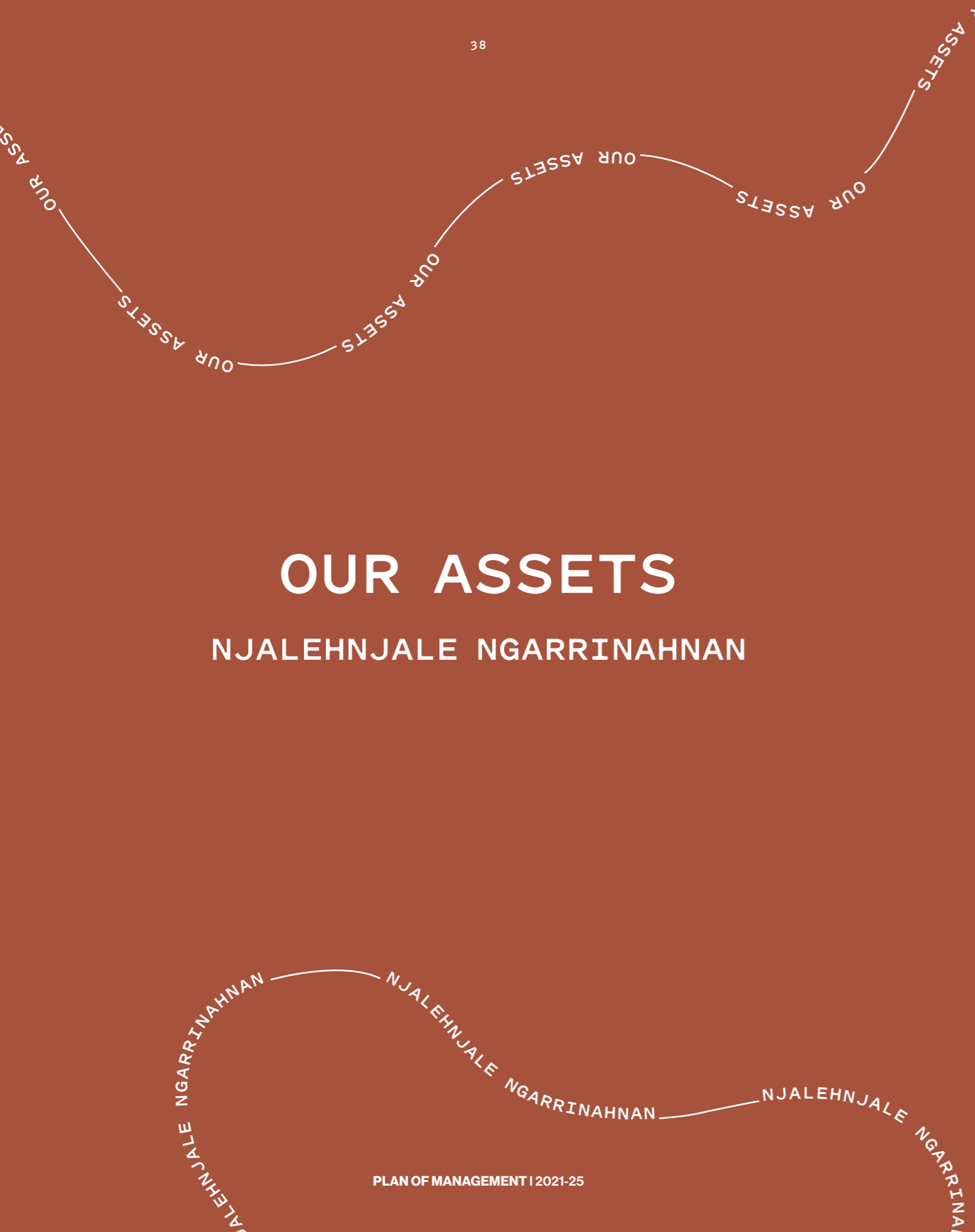
**ngarridjare njalehnjale
ngarrinahnan kamak dja**

we want our assets to be healthy and

**ngarridjare nabang karridjirrkan
kaluk kore kanjdji**

we want threats to country
pushed down low





OUR ASSETS

NJALEHNJALE NGARRINAHNAN

Our assets represent what is most important to us as Nawarddeken caring for the kuwarddewardde. Our assets are the cultural, environmental and social targets upon which the health of the kuwarddewardde is dependent, and they are what Warddeken rangers and landowners are working together to protect.





The assets in this Plan of Management were established based on consultations with more than 200 Warddeken members over a two-year period in 2015-2016. Assets remain the same as in the previous plan, allowing for continuity of management and monitoring.

Both people and country are healthiest when the kuwarddewardde is populated and is being actively managed by Nawarddeken. As a result, our chosen assets must be understood as holistic, representing not only the physical and ecological elements of the kuwarddewardde but also the cultural, social and economic values that support Nawarddeken to live on country.

To ensure we represent the interests of landowners and make the best use of resources, our assets incorporate our bininj knowledge and cultural practices, which are integral to the health of the kuwarddewardde and essential to good management of the IPA.

In this section we describe each asset, outline goals for maintaining or improving their health and list the strategies we have developed to achieve these goals. Strategies designed to improve the health of a specific asset are called direct strategies. When these strategies also contribute to the health of other assets, they are called supporting strategies.



ASSET 1

Bininj Kunmayali

Knowledge



ASSET 3

Djang

Sacred Sites



ASSET 5

Manwurrk

Fire



ASSET 7

Manme dja Manrakel

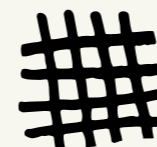
Food and Medicine Plants



ASSET 9

Anbinik

Allosyncarpia Forests



ASSET 11

Governance



ASSET 2

Bininj Kunwok

Languages



ASSET 4

Kunwarddebim

Rock Art



ASSET 6

Mayh

Stone Country Fauna



ASSET 8

Kukku

Freshwater Places



ASSET 10

**Kundulk
Andjuhdjumbung
Kukorlh**

Arnhem Sandstone Shrublands



ASSET 12

Kunred dja Durkmirri

Communities and Livelihoods



ASSET HEALTH

Management plans are focused on maintaining or improving asset health, and removing or reducing threats.

Working with senior bininj experts, landowners and where appropriate external experts, we have reviewed the key attributes and indicators of health for each of our assets, allowing us to establish an overall health ranking. Most attributes and indicators remain relevant and have been carried across from the previous plan. Where necessary, updates have been made.

Our aim is to maintain or improve the health of all assets over the life of this plan. This section of the plan provides an overview of our assets and their current health ranking.

The table on the following page details the current health of each of our assets as determined through this planning process.



ASSET HEALTH 2020

TBD POOR FAIR GOOD VERY GOOD

	Bininj Kunmayali Knowledge	●
	Bininj Kunwok Languages	●
	Djang Sacred Sites	●
	Kunwarddebim Rock Art	●
	Manwurrk Fire	●
	Mayh Stone Country Fauna	●
	Manme dja Manrakel Food and Medicine Plants	●
	Kukku Freshwater Places	●
	Anbinik Allosyncarpia Forests	●
	Kundulk Andjuhdjumbung Kukorlh Arnhem Sandstone Shrublands	●
	Governance	●
	Kunred dja Durkmirri Communities and Livelihoods	●

● **TO BE DETERMINED**

Insufficient knowledge is available to define asset health. Research is required to gain an understanding of the asset's key attributes and indicators of health.

● **POOR**

The asset is threatened with local extinction. Current work associated with the asset is not addressing the issues. Restoring the health of the asset is increasingly difficult and will require significant changes to current works, which is expensive and resource intensive.

● **FAIR**

The health of the asset is not acceptable. Significant aspects of the asset are unhealthy and current work associated with the asset is not addressing the issues. Failing to act will result in further deterioration. A modest increase or change to current work is required.

● **GOOD**

The asset health is within an acceptable range. Minor changes to current work associated with the asset are required to maintain or improve health.

● **VERY GOOD**

The asset is very healthy. Current work associated with the asset should be maintained.



ASSET 1

Bininj Kunmayali Knowledge



Kunmayali flows through all aspects of life on country, and kunmayali is central to each of the Assets in this plan. Our unique knowledge and skills define us as Nawarddeken, the people of the kuwarddewardde. Our professors firmly believed that Warddeken’s cultural knowledge programs must continue and expand, stressing the need for kunmayali to be passed on to younger generations.

Customary knowledge and practice are interwoven throughout each and every work activity undertaken by Warddeken rangers; whether it be lighting fires at the right time of year in the right weather conditions, understanding the key habitats and behaviours of endemic fauna, or being aware of the location of sacred sites while undertaking roadwork – kunmayali is an integral component of all that we do to manage the kuwarddewardde.

Using our knowledge about aspects of land management such as cultural sites, plants and ecosystems, seasonality and freshwater systems keeps our culture strong. Carrying out cultural responsibilities and practices, such as visiting djang, burning according to tradition and law, harvesting and preparing bush foods and medicines, enacting ceremonies, and performing increase rituals ensures that the kuwarddewardde is healthy. We ourselves are also healthier and happier when we do these things.

In response to a resounding call from elders and cultural leaders, under this plan we will develop and resource an innovative Kunmayali Project to preserve the kunmayali elements prioritised by Nawarddeken as being essential to the health of our assets. This ambitious project will focus on knowledge that is particularly imperilled, more deeply integrate opportunities for customary knowledge use and transference into the everyday ranger work programs,

capitalise on the opportunities provided through Nawarddeken Academy, and most critically, empower and support senior people to lead these endeavours. We have lost many of our professors already, and the tragic reality is that more may leave us over the life of this Plan. If we are to maintain the nuanced knowledge and skills of the kuwarddewardde in a real and lasting way, we need to act, and we need to start immediately.

THE MAJOR DIRECT THREATS



Loss of Bininj Knowledge and Languages



Empty Country



Social and Community Problems



ACHIEVEMENTS UNDER 2016-2020 PLAN

- Facilitated annual stone country bushwalks following bininj manbolh (traditional walking routes) and annual cultural camps involving more than 300 Nawarddeken
- Increased opportunities for intergenerational learning through targeted activities focused on specific knowledge or skills
- Increased opportunities for intergenerational learning more generally through the creation of the Daluk Engagement Program and the establishment of Mamardawerre ranger base
- Established the Nawarddeken Academy - three registered independent bi-cultural schools operating at Kabulwarnamyo, Manmoyi and Mamardawerre, where cultural learning is taught alongside western learning

Bininj Kunmayali Knowledge

2016 → 2020

KEY ATTRIBUTES

Bininj time on country
● 2016 → ● 2020

Bininj knowledge
● 2016 → ● 2020

GOALS

By 2025, there will be more on-country opportunities for Nawarddeken to maintain and pass on customary knowledge than there is at the commencement of the plan

A majority of key informants and rangers from all wards are satisfied with the depth of customary knowledge that is being used in the management of the IPA and transferred to younger generations

DIRECT STRATEGIES

By 2024, fund and deliver a dedicated Kunmayali Project to strengthen delivery of cultural programs and events across the IPA and further integrate bininj knowledge into work programs

Conduct annual on-country events focussed on intergenerational knowledge exchange such as cultural camps, bushwalks and kangaroo fire drives, with at least one event in each ward each year

By 2022, implement a Djang Project to connect members with djang and document sites, focusing on intergenerational knowledge transfer, with visits to at least one djang site in each clan estate across the life of the Plan

Document knowledge of significant rock art complexes with senior landowners through survey camps, site management and monitoring and family visits

By 2022, establish a Bininj Kunmayali First Aid Program delivering annual customary knowledge-based first aid training in concert with western first aid training, incorporating seasonal bush medicine harvesting, processing and use

Maintain the Daluk Ranger Program at Kabulwarnamyo, Mamardawerre and Manmoyi ranger bases

SUPPORTING STRATEGIES

By 2022, develop and implement a Clan Profile and Engagement Strategy for each estate in the IPA, to expand membership and representation in delivery of the Plan and improve understanding of the ancestry and geneology of IPA clan groups

Continue to provide full-time education at Kabulwarnamyo, Mamardawerre and Manmoyi outstation communities

By 2023, with senior people from each ranger base, create a list of historical knowledge recordings that Warddeken does not have, and by 2025 have developed and executed a process to retrieve these recordings

By 2023, establish at least two more permanent camp sites accessible from ranger bases for conducting knowledge, language and Nawarddeken Academy learning activities

By 2022, develop Kuwarddewardde Malkno learning units on Mayh, Kukku, Manwurrk, Anbinik and Kunwarddebim to be taught at Nawarddeken Academy

By 2022, develop age-appropriate teaching and learning resources for Kunbalak (mother-in-law) and Kunderbuy (triadic kinship) respect registers to promote their understanding and use

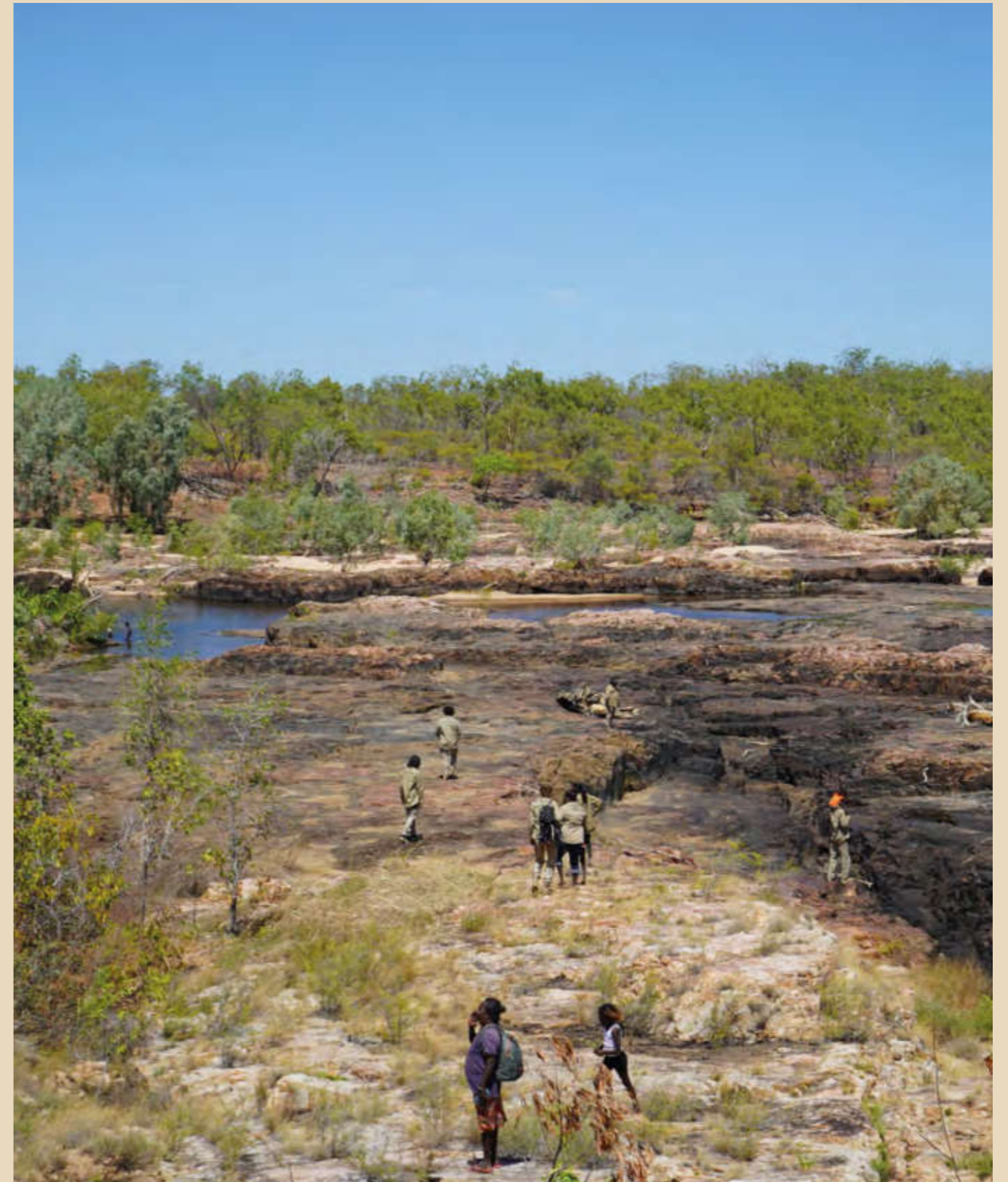
KEY ● TO BE DETERMINED ● POOR ● FAIR ● GOOD ● VERY GOOD ■ DIRECT ■ SUPPORTING



‘We are teaching younger people about the country, the walking routes, the place names, experiences with the country and then they in turn follow this way.

This is not a new thing. It’s just what our old people before us taught us.’

— Mary Kolkiwarra Nadjamerrek



ASSET 2

Bininj Kunwok Languages



Our languages contain the words to describe the mythology and landscape of the kuwarddewardde, and speaking our language is an integral part of our cultural identity. There are six languages that make up the Bininj Kunwok language group. While Kundedjnjenghmi is the original language of the kuwarddewardde, most young Nawarddeken are not fluent speakers. Today, Kunwinjku is the dominant language spoken across west Arnhem Land with around 1200 speakers, the majority of whom live in Gunbalanya.

We recognise that we are fortunate to still speak our language, as we know that many other Aboriginal people across Australia have not been so lucky. However, senior community members and elders remain concerned that younger generations are not attaining a comprehensive vocabulary in Kunwinjku. Mastery of language can only truly be reached through learning and practising language on country, as a large proportion of the Kunwinjku vernacular is related to the natural and cultural environment. At Warddeken, we play a vital role in helping to reduce the loss of language by providing the space and resources for children and young people to learn Kunwinjku on country, where interaction with the natural and cultural environment supports the expansion of their vocabulary.

Senior landowners have also been very clear in their desire to promote broader learning of the 'respect' language registers kunderbuy and kunbalak. Kunderbuy is a special set of extensive tri-relational kinship terms, which encode two people's (the speakers') relationship with a third person (who is being spoken about). Kunbalak is a kin respect register which is used with one's actual ngal-kurrng (spouse's mother and her sisters) and na-kurrng (spouse's mother's brothers).

Both kunbalak and kunderbuy are considered extremely important for maintaining an understanding of bininj society and preserving social cohesion and respect amongst families and communities.

Under this plan, we are committed to establishing a dedicated Kunwok Project that will promote, perpetuate and celebrate the languages of the kuwarddewardde. We will partner with the Nawarddeken Academy and the Bininj Kunwok Regional Language Centre to strengthen this work.

THE MAJOR DIRECT THREATS



Loss of Bininj Knowledge and Languages



Empty Country

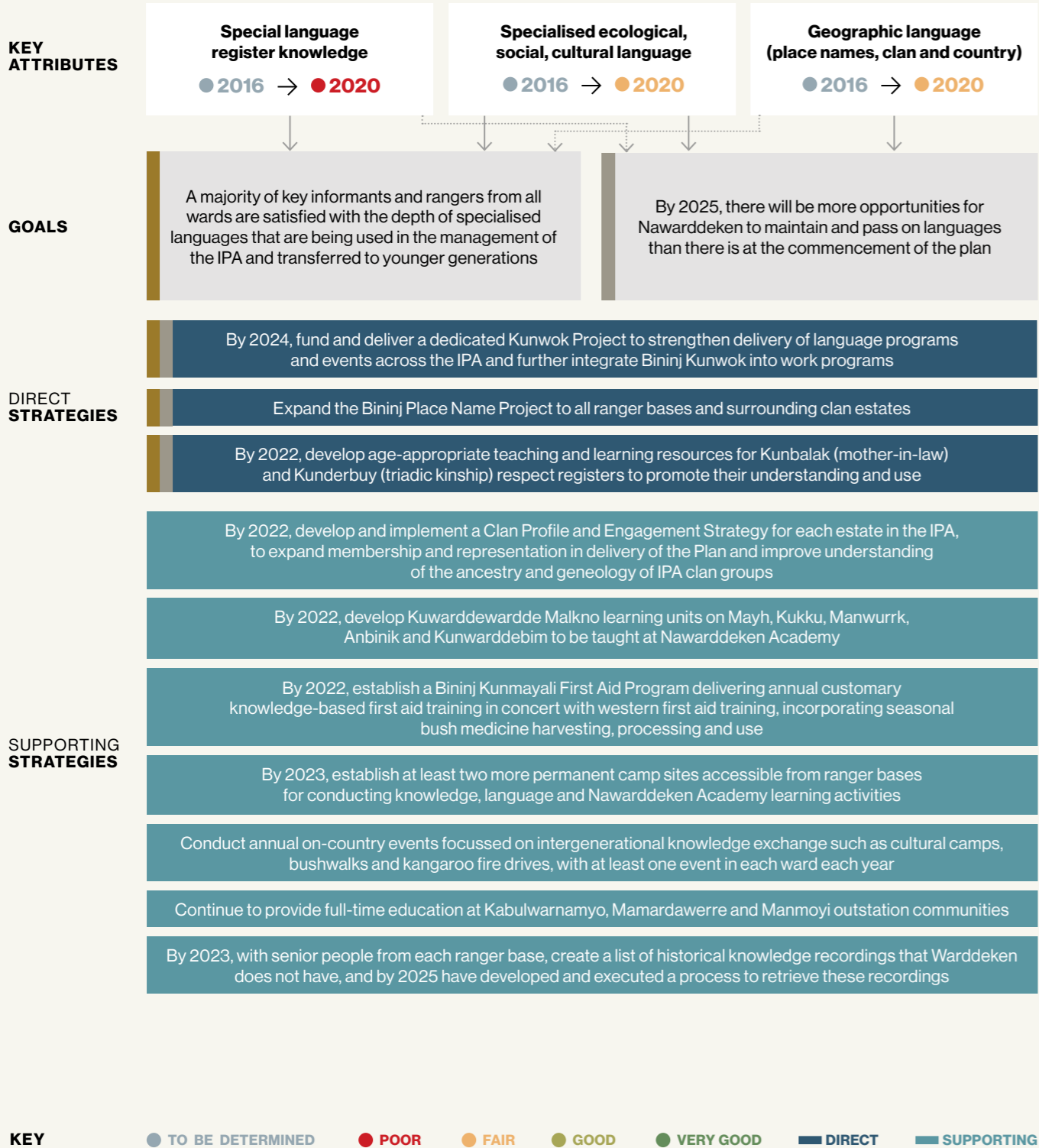


ACHIEVEMENTS UNDER 2016-2020 PLAN

- Installed more than 150 place name signs across numerous clan estates
- Significantly increased the use of Bininj Kunwok in communication and reporting materials for members
- Published six books in Kunwinjku which were distributed to schools across the region
- Increased linguistic work performed by rangers across all bases including transcription and translation of culturally important audio and video
- Developed a custom bilingual database for the Mayh Species Recovery Project
- Encouraged non-indigenous staff to complete Kunwinjku language courses

Bininj Kunwok
Languages

2016 → 2020



‘We will use our knowledge because we need to practice the fragile cultural practices that are about to disappear. Our language is important in land management.

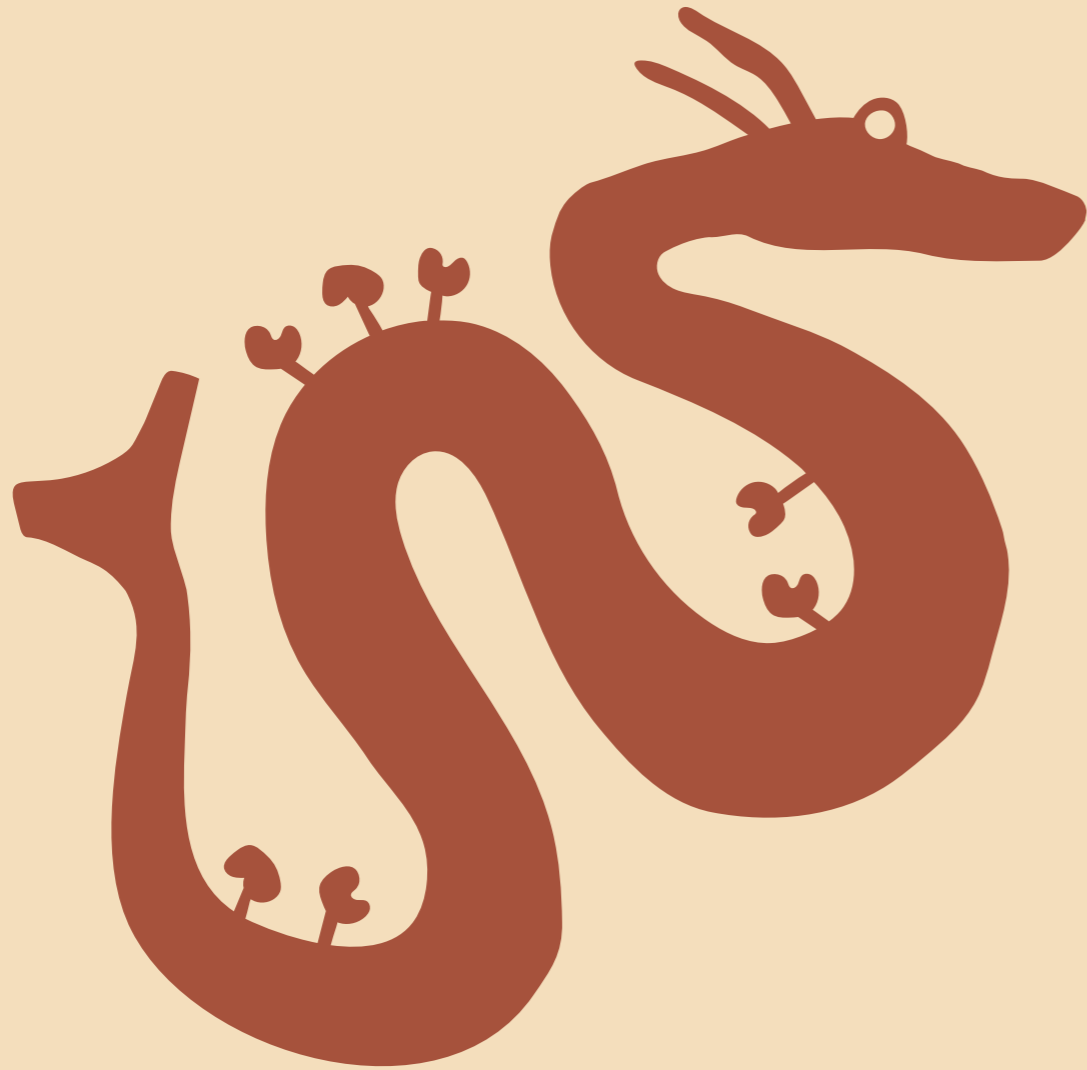
Children can lose and forget about complex things such as kunderbuy (triangular kinship system), kunbalak (avoidance register language) and other things the old people did. We can teach our children these things as part of this work.’

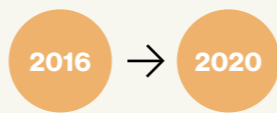
— Elizabeth Nabarlambarl



ASSET 3

Djang Sacred Sites





Djang and other important cultural sites are found throughout the IPA and need to be managed according to Nawarddeken law. Landowners from across the IPA stress the importance of maintaining knowledge of djang and the associated customary protocols, and wish to see Warddeken assist in the maintenance of this knowledge and continuation of caring for these vitally important places.

This asset includes places where ancestral creation beings are considered to be resting, or have a particular association through bininj lore. It includes increase sites where rituals are staged to ensure the ongoing abundance of key plant and animal species, particularly those used by bininj as food. For the purpose of this plan, the asset also includes places that are not technically djang but are still of great cultural importance to Nawarddeken, such as ceremony sites, burial sites, ochre mines and stone quarries.

Cultural protocols sometimes apply to djang, and some sites can only be visited by particular people. For example, some djang are only safe to be visited by initiated men, some sites are restricted to members of certain skin group subsections, and yet other sites are considered boldjjamun (sacred/restricted) and are to be avoided by everyone. However, a great many djang are public and can be visited by bininj as well as balanda.

To maintain the health of many djang, custodians are required to perform a range of site-specific rituals to communicate with the ancestor spirits.

Warddeken have recorded and mapped the location and details of a number of major djang and other important cultural sites, and these records and maps inform the operationalisation of our work programs. We have also installed place name and sacred site signs at some of the more public sites. However, there is still much work to be done under this asset, as the location and details

of important cultural sites for the majority of clans – particularly from the Walem and Kakbi wards – were mapped and recorded by balanda, and this information is still held by individuals or government agencies - currently inaccessible to landowners.

To ensure that djang are managed according to bininj law and cultural protocols, it is essential that the owners and managers of these sites retain control of this information. It is vitally important that customary knowledge of djang be shared with younger generations in meaningful and engaging ways, as these sites represent the most important places in the Warddeken IPA.

THE MAJOR DIRECT THREATS



Loss of Bininj Knowledge and Languages



Empty Country



Social and Community Problems

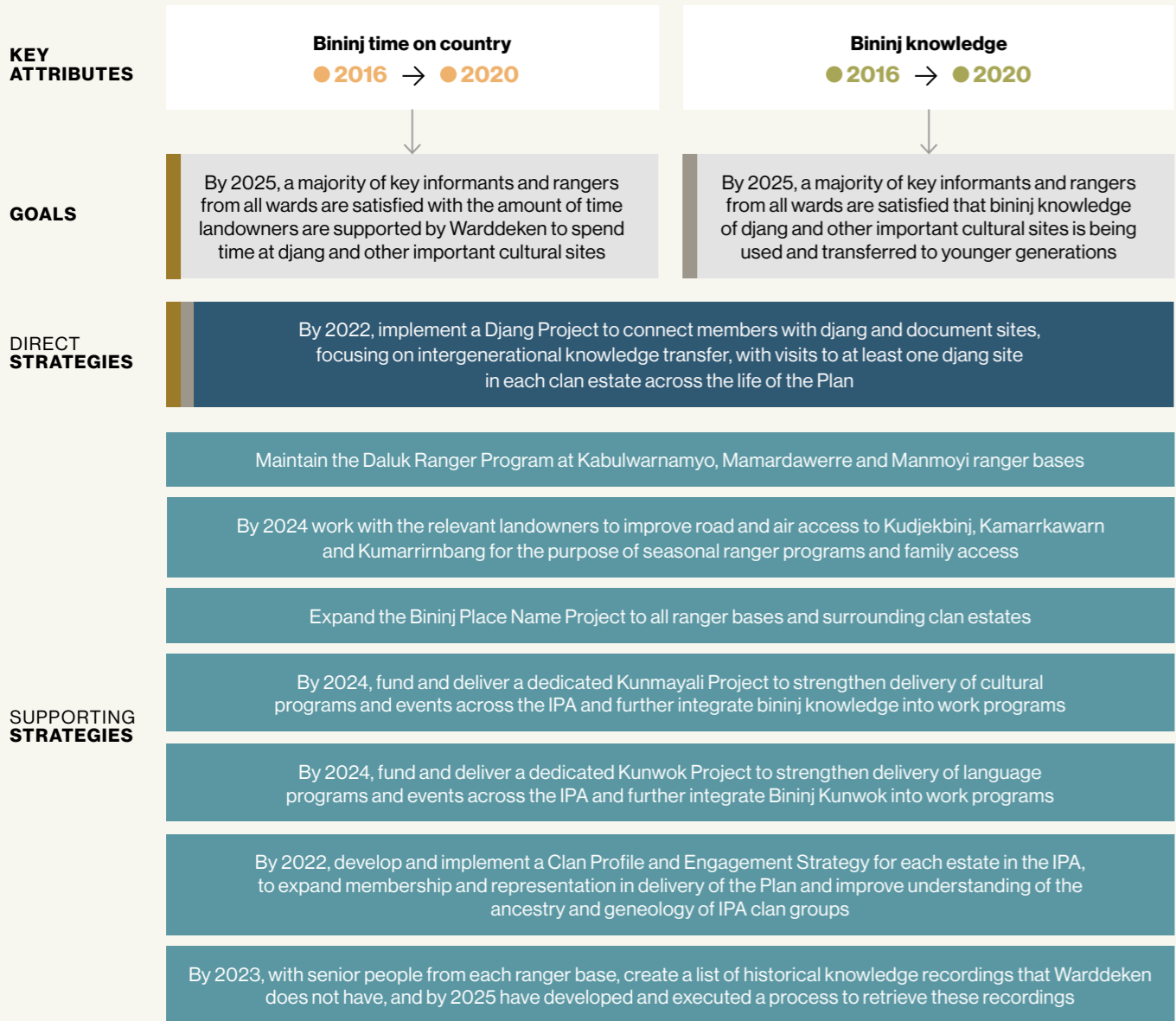


ACHIEVEMENTS UNDER 2016-2020 PLAN

- Recorded and mapped the location and details of many djang and other important cultural sites which inform our work programs
- Installed place name and sacred site signage at many of the more public djang sites
- Worked closely with Nawarddeken Academy to develop a cultural curriculum incorporating knowledge of djang
- Facilitated site visits to djang for the purpose of performing ritual increase ceremonies

Djang Sacred Sites

2016 → 2020



KEY ● TO BE DETERMINED ● POOR ● FAIR ● GOOD ● VERY GOOD ■ DIRECT ■ SUPPORTING





‘As part of our work you learn about sacred places and important camping sites and there are discussions about who owns which place, which clan. Which moiety owns it, duwa or yirridjdja.

Old people need to have opportunities to really teach us properly so we can understand where that country and its sacred places are located.’

— Rosemary Nabalwad



ASSET 4

Kunwarddebim Rock Art



Tens of thousands of kunwarddebim sites are spread across the vast expanse of the Warddeken IPA, representing one of the most extensive and significant collections of rock art anywhere in the world. Our kunwarddebim documents untold generations of life in the kuwarddewardde, from the deep past until colonisation.

Paintings span a range of stylistic periods, and are usually located on the walls and ceilings of rock shelters. Spear tips, stone axes, grinding hollows, clap sticks and other archaeological artefacts can also be found in these shelters. These were the occupation sites of our ancestors, particularly in the wet season. They were their homes.

The importance of cultural places is not limited to the art or artefacts found there. Generations of bininj used these places over thousands of years, as evidenced by the many layers of art that some complexes contain. They embody a rich library of information and knowledge about mythology and lore, plants and animals, the way our old people lived and the arrival of balanda. They contain stories that need to be told in Bininj Kunwok to emerging generations. Some kunwarddebim are very old and some are recent, including numerous paintings by Warddeken professor, Bardayal Nadjamerrek. As well as occupation sites, other archaeological sites such as stone arrangements and stone quarries can be found across the kuwarddewardde.

These sites and all they contain are our physical and intellectual property, and this is the foundation of our rock art work program. Visiting these places keeps them healthy, and so connecting Nawarddeken with bim is of the utmost importance. We acknowledge that kunwarddebim is also considered special by balanda, who have recorded and studied many sites in our region.

However, it is essential that balanda respect our right as custodians of the kuwarddewardde to determine priorities for research and direct the management of our cultural places.

In 2019, the Kunwarddebim Project formally commenced and funding for a dedicated rock art officer was secured. This allowed rock art survey and conservation activities to run throughout the year, and has allowed us to engage more landowners from more clan groups in this critical work. In 2020, a project manager was employed, with a view to increase the scale of the Kunwarddebim Project. We are immensely proud of the work we have already achieved in this space, and under this new plan we will grow and expand work to involve more landowners, survey and protect more sites, and support interested rangers to develop technical conservation skills.

THE MAJOR DIRECT THREATS



Loss of Bininj Knowledge and Languages



Empty Country



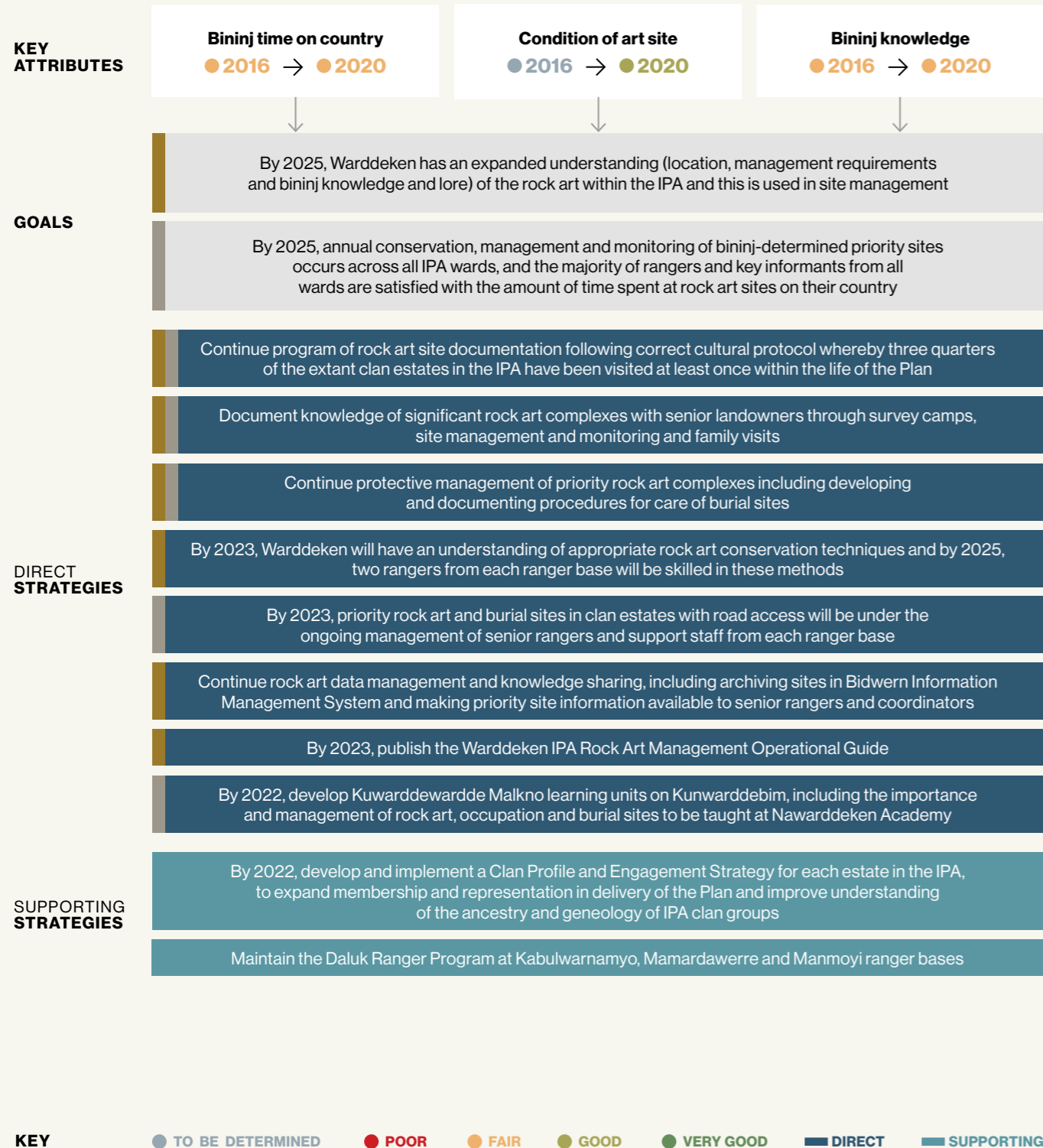
ACHIEVEMENTS UNDER 2016-2020 PLAN

Established and funded the Kunwarddebim Project, which has led to:

- A major increase in the number of family and clan-based rock art camps with a focus on intergenerational learning and connecting landowners with their cultural heritage
- A greater number of rock art surveys and an increase in the overall percentage of the IPA comprehensively surveyed
- The documentation of first-hand accounts of art sites from elders and cultural leaders

Kunwarddebim
Rock Art

2016 → 2020



KEY ● TO BE DETERMINED ● POOR ● FAIR ● GOOD ● VERY GOOD ■ DIRECT ■ SUPPORTING





‘These paintings are the stories of Nawarddeken told over thousands of years. Some were painted by people like us and others were placed there by spirits.

Rock art is our cultural heritage and we are the ones with a responsibility to care for these places.’

— Donna Nadjamerrek



ASSET 5

Manwurrk Fire





For many thousands of years, we have used fire as the primary tool to manage the kuwarddewardde to our benefit, and the ecology of the IPA expresses this imprint in many ways. Manwurrk is culturally important and is used for strategic hunting, ceremonies, protecting important cultural sites and for clearing camping and living areas. Many endemic plants, animals and ecosystems of the kuwarddewardde rely on burning regimes that have evolved over countless generations.

According to Nawarddeken knowledge and culture, burning is based on a regime of small, cool, early dry season fires. Burning this way helps reduce the threat of large, unplanned wildfires late in the dry season. After the depopulation of the plateau in the 1960s, large wildfires dominated in the absence of dry season burning patterns and devastated the region.

The West Arnhem Land Fire Abatement (WALFA) project was a turning point that allowed the Nawarddeken diaspora to gain support to return to country. Under WALFA, Warddeken reduces carbon emissions caused by late season wildfires through reinstating customary burning regimes. Money earned through the sale of Australian Carbon Credit Units (ACCUs) contributes significantly to Warddeken's budget. Our reputation amongst business, conservation and Indigenous organisations rests to some degree on the success of our company under WALFA.

Manwurrk remains the core component of the dry season work program. Through implementing a combination of traditional and modern fire management techniques - primarily prescribed burns in the early dry season and wildfire suppression in the late dry season - Warddeken rangers have stabilised the fire regime of the kuwarddewardde. This management protects

the environment and cultural heritage sites, as well as addresses climate change through reducing greenhouse gas emissions.

Our professors stressed that burning must be carried out according to customary responsibilities and traditional knowledge, and this remains the foundation of our fire management activities. Our early dry season fire management program is one of the key ways in which landowners from across the IPA participate in the active management of their clan estates. The use of helicopters to deliver aerial burning is critical in connecting landowners from the most remote estates with their country. It is also the most powerful landscape-scale management tool we have available in a landscape that has evolved around customary burning practice.

THE MAJOR DIRECT THREATS



Wildfire

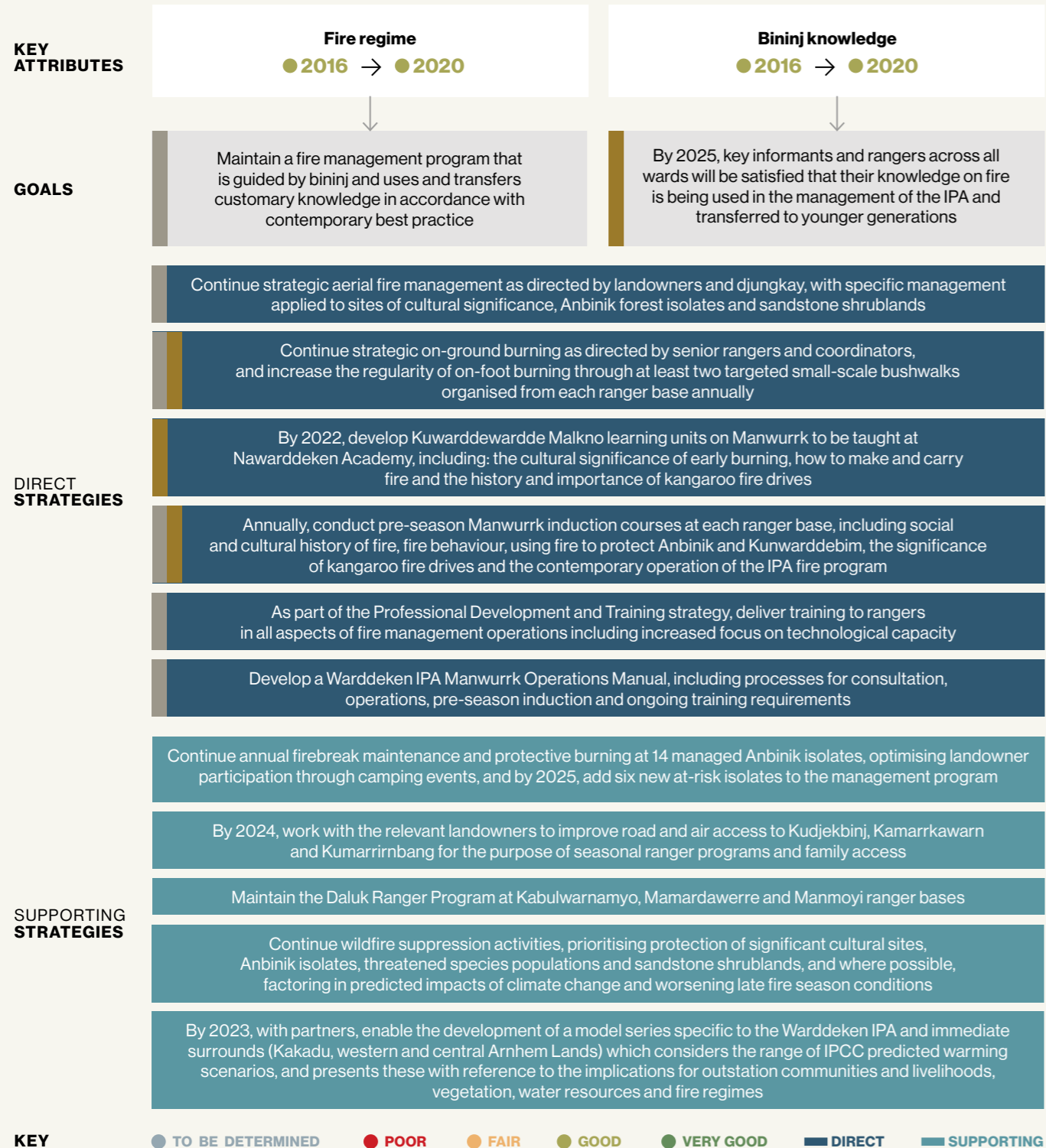


Climate Change



ACHIEVEMENTS UNDER 2016-2020 PLAN

- Maintained a gentle fire regime across the IPA in the face of increasing wildfire prevalence
- Very high levels of landowner engagement across the early dry season burning program, with hundreds of bininj involved annually in consultations, on-ground burning, aerial burning and cultural events involving fire
- A rolling average of less than three per cent of the Warddeken IPA impacted by late dry season wildfire annually



KEY ● TO BE DETERMINED ● POOR ● FAIR ● GOOD ● VERY GOOD ■ DIRECT ■ SUPPORTING





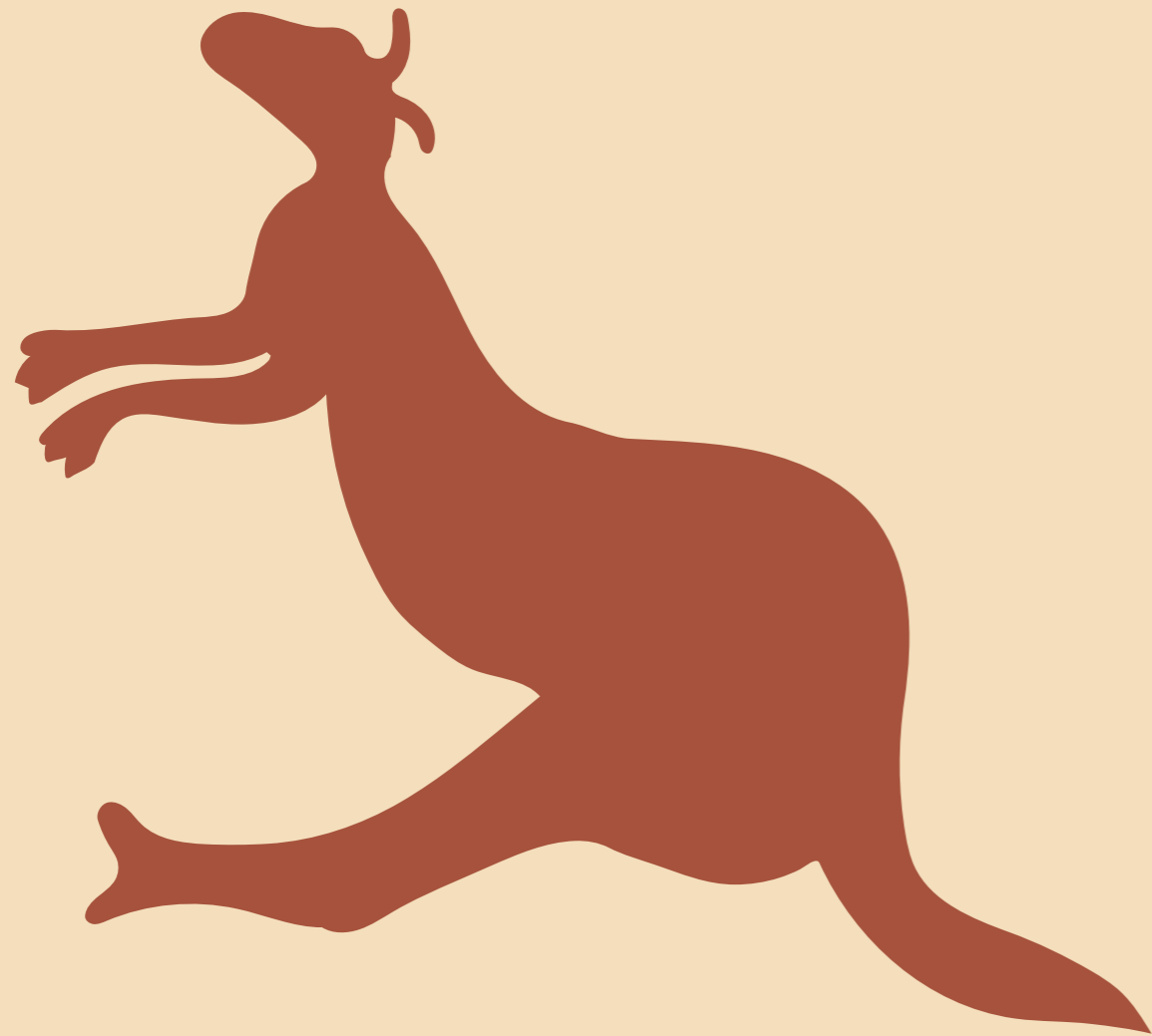
‘We must pass on knowledge to young people, so that they think about the responsibility to burn. They can do it on foot - they get their things and off they go, hunting and burning because that’s how people used to do it in the past.

That’s how they gain knowledge about fire, seeing which areas have been burnt, which areas got burnt for no good reason and making decisions about hunting and burning based on that. And the women would also be burning, out collecting food and interacting with the bush, digging yams. Bininj way.’

— Terrah Diliyang Guymala

ASSET 6

Mayh Stone Country Fauna



Many mayh (animals) of the kuwarddewardde hold cultural significance to Nawarddeken. They can be associated with sacred sites, song lines, creation stories and ceremonial practices.

They may be our totems, have morrdjdjanjino (increase ritual songs) or simply be a favourite bush food. Nawarddeken feel strongly about mayh and are passionate about their conservation.

Our mayh have also been afforded conservation significance by western science due to their status as rare, threatened or endemic. Some of these species include alyurr (Leichhardt's grasshopper), nawaran (Oenpelli python), burarr (water monitors), yirlirnkirrkirri (white-throated grasswren), djabbo (northern quoll), djebuyh (northern brushtail possum), bakkadji (black-footed tree-rat) and nabarlek (pygmy rock-wallaby).

Research has shown that the number and diversity of small mammals and large reptile species have declined across the kuwarddewardde over the last 20 or so years. This mirrors similar declines across much of northern Australia and represents a significant national and international conservation challenge. The loss of mayh is not only a loss to biodiversity, but is painful for bininj in an emotional and spiritual sense.

Through the work of our Mayh Species Recovery Project, Warddeken runs the largest species monitoring network established by an Aboriginal organisation on an IPA in Australia. Co-designed by bininj leaders and elders to detect long-term changes in key species, the project operates across 21 clan estates and involves landowners from across the IPA.

The project's co-benefits go well beyond biodiversity and western science learnings. Equally important is the handing down of mayh lore and knowledge to emerging generations of Nawarddeken. It is important to us that our children learn the various species names, their behaviour, their moiety, how to hunt and prepare their meat according to custom, and their songs and traditional stories.

Under this Plan of Management, we will gain a greater understanding of the impacts of our key management programs - fire and feral animal control - on mayh populations across the IPA. These learnings will allow us to deliver species-specific management actions to foster the recovery of threatened small mammals in areas of high ecological and cultural importance.

THE MAJOR DIRECT THREATS

-  **Loss of Bininj Knowledge and Languages**
-  **Wildfire**
-  **Feral Animals**
Cats and Cane Toads
-  **Feral Animals**
Buffalo
-  **Feral Animals**
Pigs
-  **Climate Change**



ACHIEVEMENTS UNDER 2016-2020 PLAN

- Established the Mayh Species Recovery Project, employing an ecological monitoring officer to work with bininj to develop and implement an IPA-wide biodiversity monitoring program
- Enhanced our understanding of mayh presence and distribution across the IPA by establishing a long-term camera trap monitoring network
- Commenced an evaluation of the impact of our various work programs (such as fire management and feral animal culls) on mayh

Mayh
Stone Country Fauna

2016 → 2020

KEY ATTRIBUTES	Key mammal species ● 2016 → ● 2020	Key cultural species ● 2016 → ● 2020	Bininj knowledge ● 2016 → ● 2020
GOALS	By 2025, Warddeken will understand and apply targeted management actions for small mammal conservation	By 2025, the majority of key informants and rangers across all wards are satisfied that key cultural species are observed in the landscape	By 2025, the majority of key informants and rangers across all wards are satisfied that their knowledge of animals is being transferred to younger generations
DIRECT STRATEGIES	Continue IPA-wide camera monitoring program utilising customary and western knowledge systems, and in 2024 undertake a review of the program in the context of knowledge requirements and priorities		
	Using contemporary and traditional scientific knowledge, create materials and decision-making tools for senior landowners with respect to key species, including their interaction with fire and feral animal management programs		
	By 2022, develop Kuwarddewardde Malkno learning units on Mayh to be taught at Nawarddeken Academy, supporting senior rangers to teach cultural knowledge identified by landowners as a priority, including: learning to differentiate and name the different macropods; workshops on how to hunt, prepare, cook and learn the lore of key species; learning small mammal species using mayh monitoring images		
	By 2023, the Mayh Species Recovery Program has informed the development, resourcing and implementation of at least two site-specific small mammal management plans designed with landowners to improve the health of defined areas of high ecological and cultural importance		
	By 2023, the Mayh Species Recovery Program is expanded to include an additional project officer		
	By 2025, the Mayh Species Recovery Program is recognised as a leading regional hub for appropriate, two-way, environmental research and engagement		
SUPPORTING STRATEGIES	Continue strategic aerial fire management as directed by landowners and djungkay, with specific management applied to sites of cultural significance, Anbinik forest isolates and sandstone shrublands		
	Continue strategic on-ground burning as directed by senior rangers and coordinators, and increase the regularity of on-foot burning through at least two targeted small-scale bushwalks organised from each ranger base annually		
	Each year, conduct at least one aerial cull of feral animals in areas where landowners have granted permission, and work with landowners for other clan estates to explore options for expanding the aerial feral animal control program		
	As part of the Professional Development Strategy, establish a bininj-led ferals management team focussed on: on-ground shooting, aerial culling, butchering, meat packaging and delivery to senior landowners (within and external to IPA)		
	By 2022, implement a Djang Project to connect members with djang and document sites, focusing on intergenerational knowledge transfer, with visits to at least one djang site in each clan estate across the life of the plan		
	As per Research Agreements, ensure research partners repatriate co-generated data and products in suitable formats for storage in Bidwern, and for use by bininj contributors. Where data loss from previous research partnerships is identified, request data be again provided by the researcher		
KEY	● TO BE DETERMINED ● POOR ● FAIR ● GOOD ● VERY GOOD ■ DIRECT ■ SUPPORTING		



MAYH OF THE WARDDEKEN IPA CAPTURED ON CAMERA TRAPS 2016-2020



Djirndih Brown quail



Kinga Saltwater crocodile



Ngarrbek Echidna



Djukerre Female black wallaroo



Darrara Kimberley rock monitor



Yok Bandicoot



Djebuyh Northern brushtail possum



Dalkken Dingo



Rakul Partridge pigeon



Yahye Rainbow pitta



Korbuk Common bronzewing



Djanay Sand monitor



Narlangak Fringed-neck lizard



Mulbbu Pale field rat



Djorrkun Rock ringtail possum



Badbong Short-eared rock wallaby



Kurrukulanj Orange-footed scrubfowl



Yirrkbadj Water-rat



Barrk Black wallaroo



Borroborro Chestnut-quilled rock pigeon



Yirlinkirrkirr White-throated grasswren



Boywek Northern knob-tailed gecko



Bakkadji Black-footed tree-rat



Djabbo Northern quoll



‘Native animals are important in our country because they have a connection with us, and we have a connection with them and to the land.

We want our native animals to come back - to maintain our cultural knowledge and to pass this onto our children.’

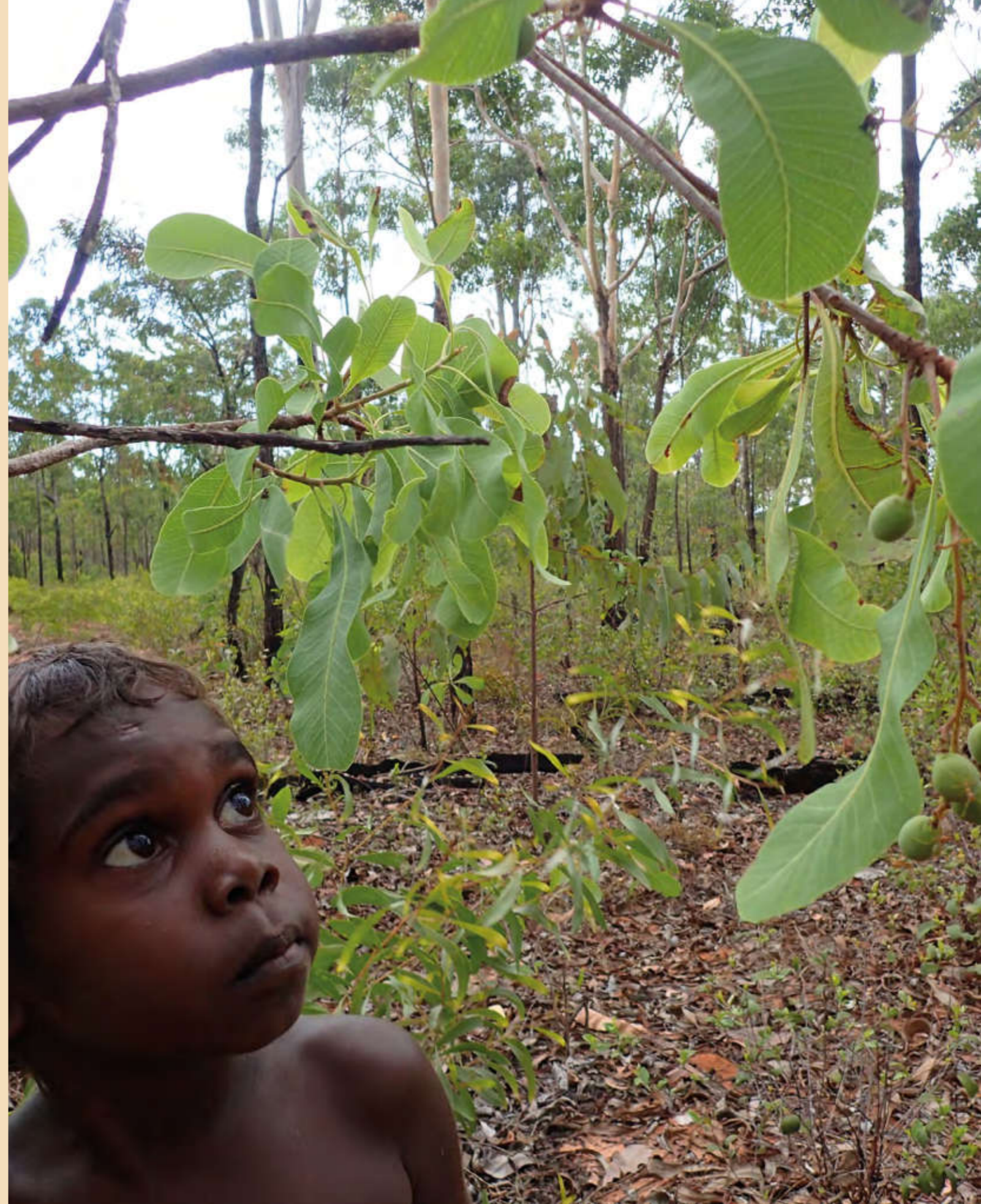
— Sarah Nabarlambarl Billis



ASSET 7

Manme dja Manrakel

Food and Medicine Plants



Customary botanical knowledge, and particularly the specialised knowledge of food and medicinal plants, is of the utmost importance to bininj. Professors, elders and cultural experts still hold this knowledge today.

They know where to find certain species based on their knowledge of country, seasons and biological indicators. They know which plants are edible and which require special preparation to make them palatable or remove toxins. They know how to use plants to cure sickness and make tools such as spears, baskets and other utensils.

A great many food and medicine plants of the kuwarddewardde have special cultural significance for Nawarddeken, as well as serve utilitarian purposes as resources for participation in the arts sector. Many plant species have also been afforded conservation significance by western science because they are rare, threatened or endemic.

Our bininj knowledge and languages associated with Manme dja Manrakel must be passed on to emerging generations to ensure that they can continue to use and benefit from the plant resources available to them. This will be a focus under this Plan of Management, as landowners have expressed concerns about the rate and depth of knowledge transmission related to flora.

Our children and young people love spending time on country collecting fruit, digging up yams, harvesting water lilies and learning to make stone country tools. Many of these practices are part of their everyday lives, and others are taught during dedicated learning activities like culture camps, bushwalks and through programs at the Nawarddeken Academy. These activities will be continued and expanded, with a particular emphasis on collaboration with the Nawarddeken Academy through their Kuwarddewardde Malkno (seasonal calendar) curriculum.

Some populations of culturally important plant species are being damaged by late dry season wildfire and feral animals, particularly buffalo and pigs. Weeds also compete with Manme dja Manrakel and some prickly weed species, such as hytpis and sida, make it difficult and unpleasant for bininj to collect bush foods.

In addition to the disturbance and damage caused by these threats, we are concerned about unseasonal weather and changes to cultural seasonal indicators, which is likely related to climate change. Warddeken will assist in the protection of significant Manme dja Manrakel sites through active management of feral animals and weeds.

THE MAJOR DIRECT THREATS



Loss of Bininj Knowledge and Languages



Feral Animals
Buffalo



Feral Animals
Pigs



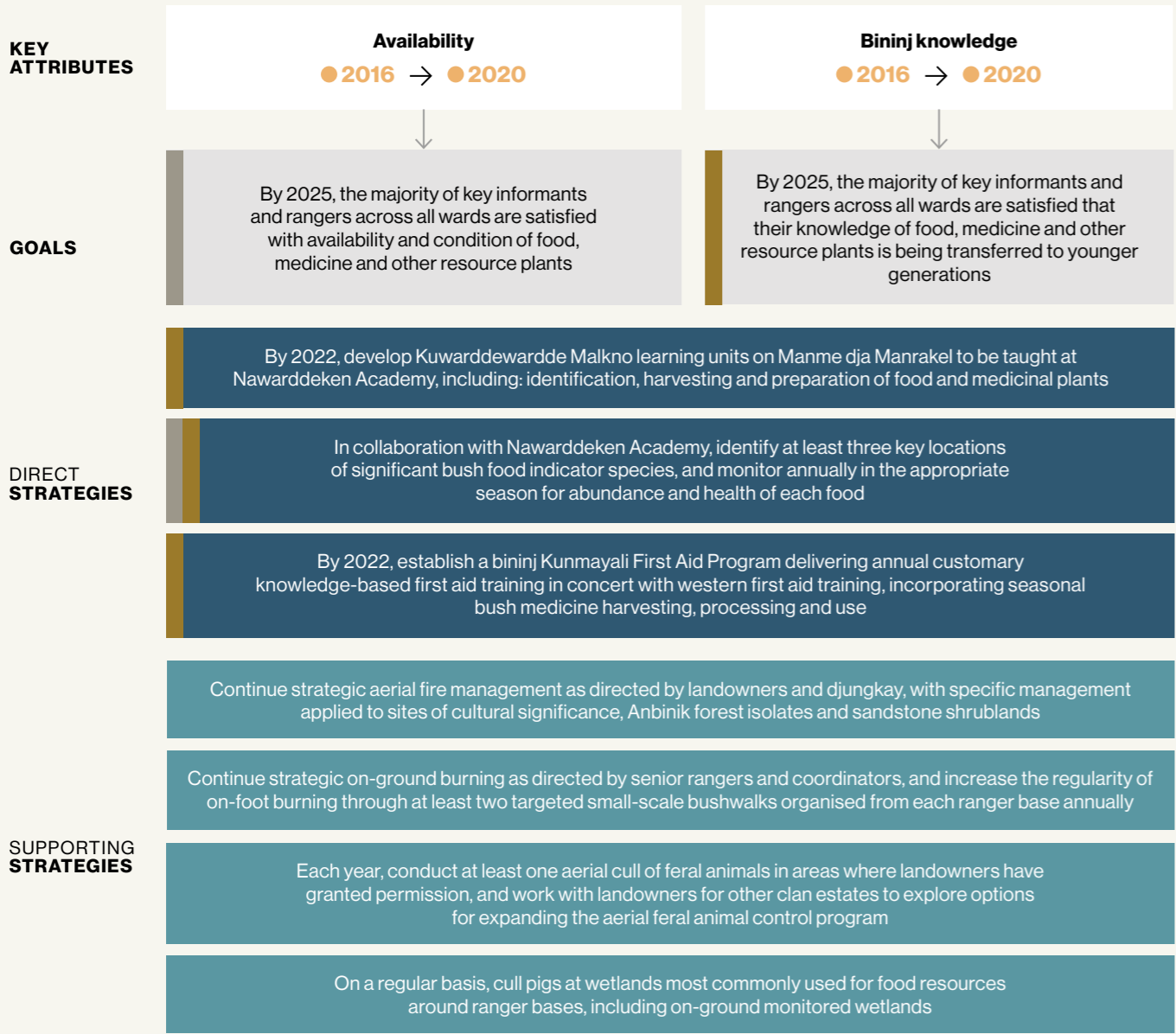
Climate Change



ACHIEVEMENTS UNDER 2016-2020 PLAN

- In collaboration with Nawarddeken Academy, developed the Kuwarddewardde Malkno (Seasonal Calendar)
- Weekly Learning on Country trips with children from each ranger base to locate and harvest in season bush foods
- Media documentation of plant foods with elders and senior cultural leaders
- Support for rangers and families within the IPA to harvest bush foods for consumption

Manme dja Manrakel
Bush Food and Medicine



KEY ● TO BE DETERMINED ● POOR ● FAIR ● GOOD ● VERY GOOD ■ DIRECT ■ SUPPORTING





‘Our country provides for us when we look after it properly, and when we know and understand it.

We must continue teaching and learning about the food and medicine plants of the kuwarddewardde, because they are still important for bininj people today.

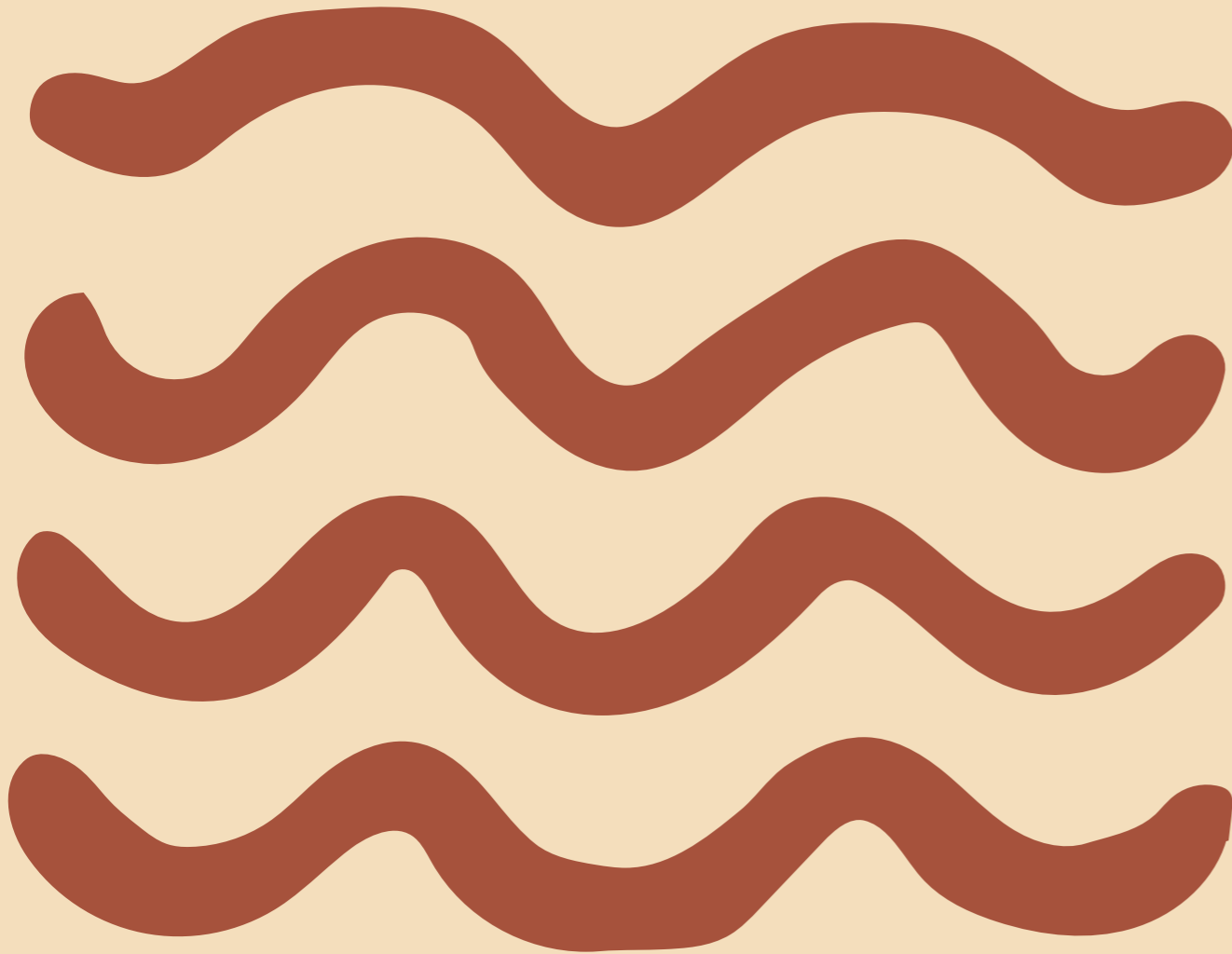
— Sarah Nabarlambarl Billis



ASSET 8

Kukku

Freshwater Places



Nawarddeken are freshwater people. The veins of freshwater that interlace the kuwarddewardde are givers of life, food, medicine and are part of the living cultural landscape. Encompassing the upper reaches of the East Alligator, Mann, Liverpool, Katherine and Goomadeer rivers, the Warddeken IPA includes springs, swamps, billabongs, creeks, streams and marshlands, sometimes referred to as perched wetlands.

Many freshwater places, particularly the deep pools below waterfalls, are sacred sites, where Ngalyod the rainbow serpent lies at rest, having travelled through the kuwarddewardde, shaping and creating the landscape. Other freshwater places are sites of ritual increase ceremonies to ensure bountiful harvests of food and animal species. Such places can only be accessed and used according to cultural protocols.

Our ancestors camped by freshwater places, and bininj continue to camp at such places today, collecting many different bush foods such as fish, turtles, water chestnuts and water lilies. Freshwater springs and rivers also provide the drinking water for our ranger stations. It is important that these places are visited regularly in order to facilitate the intergenerational transfer of knowledge and languages to younger generations.

Our kukku places and the food and medicinal resources held within them are suffering the most from the threat of feral buffalo and pigs. Buffaloes trample and foul water resources. Pigs do the same, as well as competing with bininj for prized foods such as water lily roots, yams, bush potatoes and short and long-necked turtles. Additionally, people's ability to forage for resources in freshwater places are also influenced by saltwater crocodiles when left unmanaged.

Scientists think that some freshwater habitats, particularly the upland wetlands, may also be important refuges for animals, including threatened species. Specific management actions are required to reduce these threats and protect these places. Under this Plan of Management, we will further investigate the links between the management of feral animals at freshwater places on small mammal populations.

THE MAJOR DIRECT THREATS



Feral Animals
Buffalo



Feral Animals
Pigs



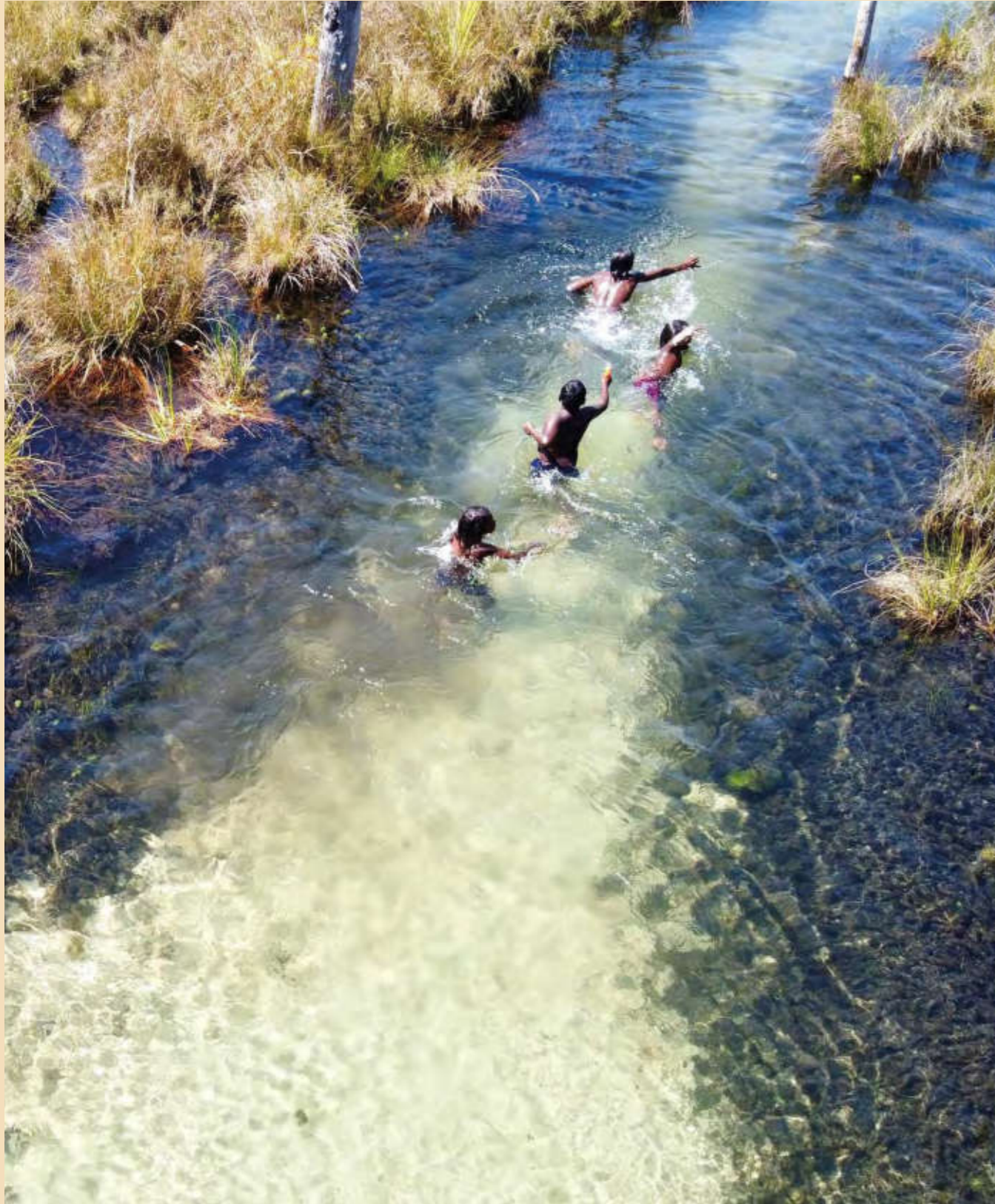
ACHIEVEMENTS UNDER 2016-2020 PLAN

- Delivered at least one 10-day aerial cull annually since 2007 - Australia's longest-running buffalo control program
- Steadily increased area of IPA culled whilst maintaining low numbers in areas previously culled
- Provided a regular supply of fresh meat to all IPA communities
- Achieved significant improvements in quality of freshwater ecosystems and associated riparian zones

Kukku
Freshwater Places

2016 → 2020





‘This is where we live. We can look after our land around us, fish, water courses, wetlands and the wildlife they sustain.

We don’t want buffalo and pigs and weeds to ruin these places, or toads which affect fish and other animals. We need to leave something for our children and grandchildren.’

— Elizabeth Bangarr

ASSET 9

Anbinik

Allosyncarpia Forests



2016



2020

The ancient, spectacular and culturally significant anbinik (*Allosyncarpia ternata*) forests were the dominant ecosystem of the kuwarddewardde as far back as the last Ice Age. These large, evergreen, broad canopied, shady trees are relictual species; primeval ancestors of today's eucalypts.

Endemic to the west Arnhem plateau, Anbinik are important to Nawarddeken for their contemporary ecological status, as well as the cultural significance they held for old people, who valued the forests for the shade, amenity and shelter they offered, and actively managed them using fire.

Anbinik are slow growing and fire sensitive, and when Nawarddeken left the plateau in the 1960s, Anbinik forests were left vulnerable to devastating wildfires. Today, Anbinik is largely restricted to the deep gorges and rugged escarpments of the plateau, where the landscape provides protection from fire. Of 74,000 hectares of Anbinik forest on the plateau, two thirds of it occurs within the Warddeken IPA.

In the savanna woodlands across the IPA, small isolate Anbinik forests persist and are dependent on active management and protection from wildfire. Old people maintained these patches through careful and deliberate burning- a practice now reinstated by rangers at fifteen of the most at-risk Anbinik isolate forests. After ten years delivering the Anbinik Protection Program we are seeing positive ecological outcomes in terms of forest regeneration and canopy cover. Just as importantly, the program has generated strong cultural learning outcomes, with senior rangers, cultural leaders and elders reporting that younger generations are becoming knowledgeable about Anbinik and how to manage it using customary techniques.

This important work must be continued in perpetuity to ensure the ongoing protection of Anbinik forests. Over the life of this plan, we intend to increase the number of managed at-risk forests, work with elders and senior cultural advisors to document links between Anbinik, songlines and ceremony and develop and implement a largely automated GIS monitoring program to demonstrate the efficacy of our management works.

By doing this work, we hope to secure the long term survival of this species, ensuring that Anbinik forest patches will be good shady places to visit and spend time for generations to come.

THE MAJOR DIRECT THREATS

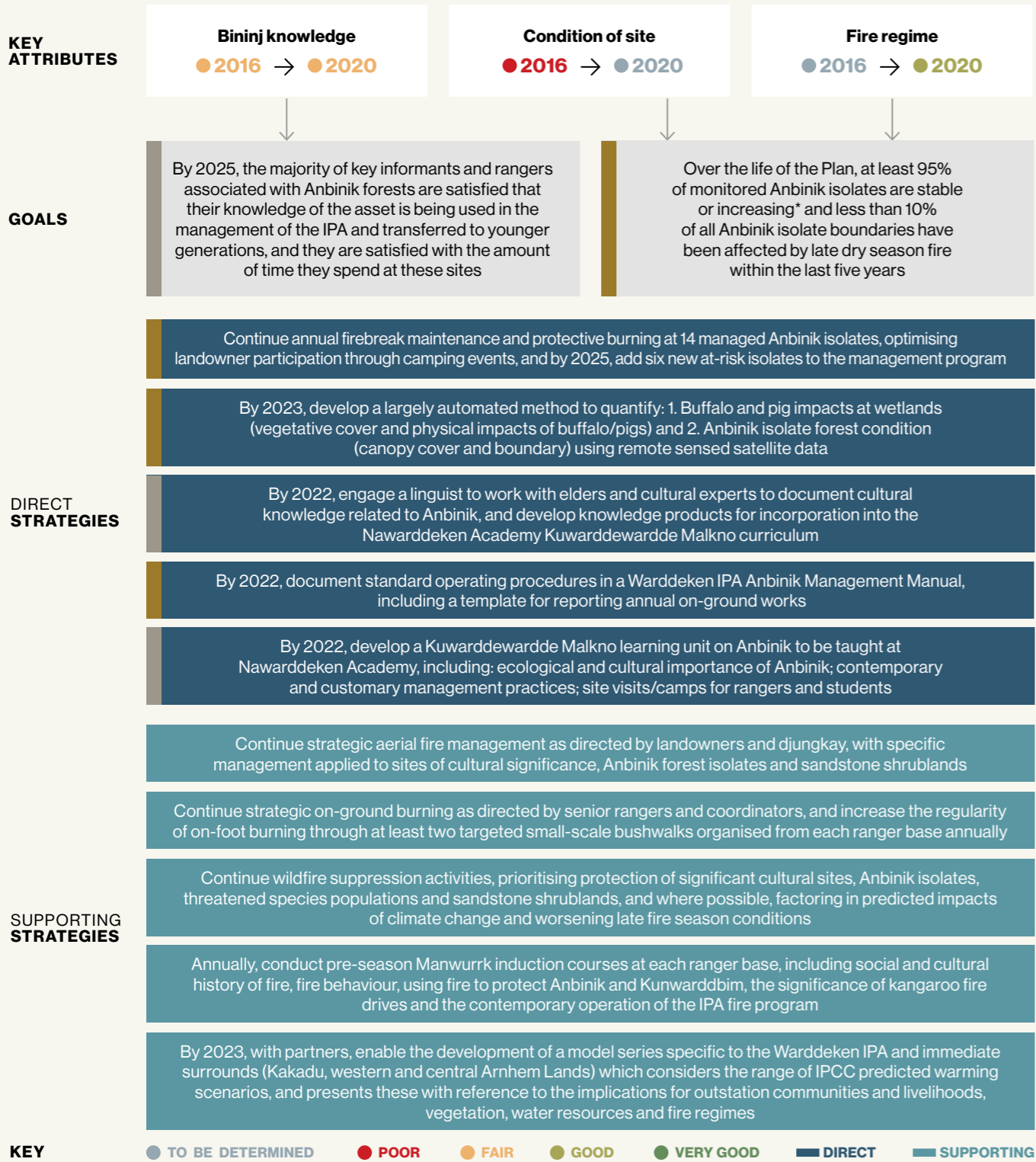


Wildfire



ACHIEVEMENTS UNDER 2016-2020 PLAN

- Reached a ten-year milestone of actively protecting 14 Anbinik isolate forests – the only such program in Australia
- Utilised aerial prescribed burning to protect more than 40 other sites annually through strategic burning
- Greatly improved cultural and ecological knowledge about Anbinik through reconnecting landowners with Anbinik forests, and teaching about Anbinik at Nawarddeken Academy





‘I have to tell a story about Anbinik. That Anbinik was there before we were born; before the old people were born. Now the old people tell us we all have look after that Anbinik. Now the younger ones have to look after the Anbinik’

— Doreen Nayilibidj



ASSET 10

Kundulk
Andjuhdjumbung Kukorlh
Arnhem Sandstone
Shrublands





Kundulk Andjuhdjumbung Kukorlh Arnhem Sandstone Shrublands



KEY ATTRIBUTES

Fire regime
● 2016 → ● 2020

GOALS

By 2025, less than 10% of Arnhem sandstone shrublands have been affected by two or more fires in the preceding 10 years where the distance to unburnt vegetation is >100m

By 2025, more than 40% of Arnhem sandstone shrublands will remain unburnt during the period of the plan

SUPPORTING STRATEGIES

Continue strategic aerial fire management as directed by landowners and djungkay, with specific management applied to sites of cultural significance, Anbinik forest isolates and sandstone shrublands

Continue strategic on-ground burning as directed by senior rangers and coordinators, and increase the regularity of on-foot burning through at least two targeted small-scale bushwalks organised from each ranger base annually

Continue wildfire suppression activities, prioritising protection of significant cultural sites, Anbinik isolates, threatened species populations and sandstone shrublands, and where possible, factoring in predicted impacts of climate change and worsening late fire season conditions

By 2023, with partners, enable the development of a model series specific to the Warddeken IPA and immediate surrounds (Kakadu, western and central Arnhem Lands) which considers the range of IPCC predicted warming scenarios, and presents these with reference to the implications for outstation communities and livelihoods, vegetation, water resources and fire regimes

KEY ● TO BE DETERMINED ● POOR ● FAIR ● GOOD ● VERY GOOD ■ DIRECT ■ SUPPORTING





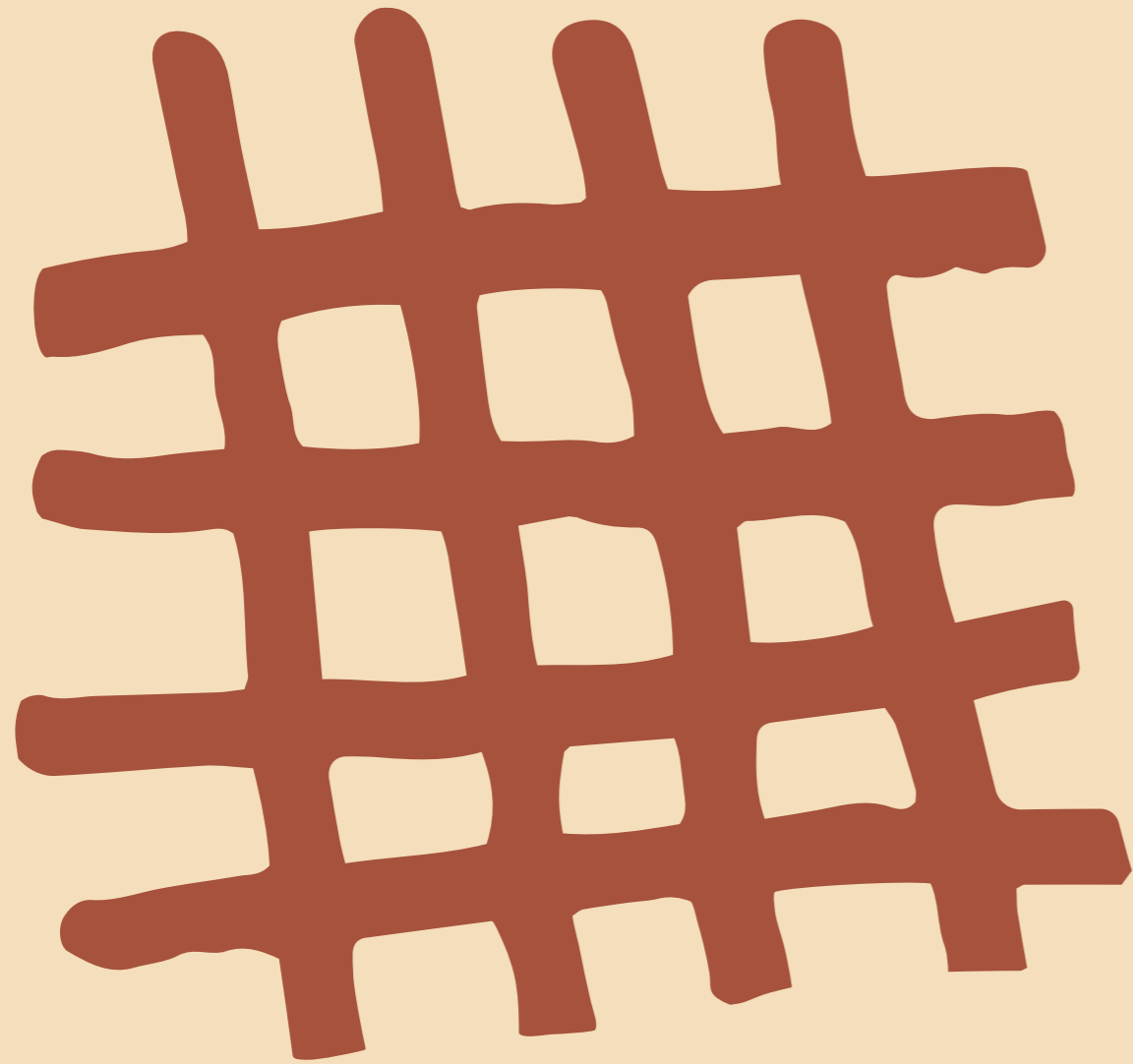
‘Even though Sandstone Shrublands do not have a name in Kunwinjku, we understand that they are important to the rest of the world because of the unique plants and animals that live there.

This ecological community is recognised as threatened by western scientists and because it is within our clan estates we therefore have a responsibility to protect it through better fire management’

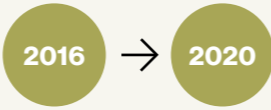
— Dean Yibarbuk

ASSET 11

Governance



Governance



Warddeken is guided by our professors' vision of healthy people living and working on healthy country. Our company's good reputation and success can be attributed to our commitment to this vision, coupled with strong governance and planning in line with the company's constitution. Warddeken values bininj and western knowledge, and combine these two approaches in our governance and management programs.

We have an active Indigenous Board of Directors and approximately 420 members drawn from the 36 clan estates which comprise the IPA. We now employ more than 200 Nawarddeken each year to deliver cultural and environmental management programs across the IPA, as well as a team of support balanda, spread across three ranger bases. We make a concerted effort to ensure we have the right people in the right jobs, and that our staff and directors have the appropriate training and support to carry out their responsibilities safely.

Warddeken has been financially secure since the company was established in 2007, meeting all of our financial and accounting reporting requirements. Our work programs are based on an annual operations plan, developed to achieve the objectives of the five-year Warddeken Plan of Management. This is our third plan of management, which will build on the good reputation and governance systems established since our incorporation.

A critical component of governance is a robust cultural governance framework; key to this is continued knowledge and shared understanding of the right people to speak for each of the clan estates of the IPA. Right now, this knowledge is secure, and we are committed to keeping it this way through the development of clan profiles, which will incorporate genealogy and ancestry.

During the life of this Plan of Management, we will continue to make a concerted effort to involve more Nawarddeken in the management of the IPA, especially young people. We will increase opportunities for landowners to reconnect and spend time on country through our various work programs, with a focus on supporting members of Walem and Karrikad wards, who had the lowest level of engagement under the previous plan.

We also need to improve our communication with members who are not actively employed or engaged in company business or do not live on country, particularly bininj representing the Walem Ward.

THE MAJOR DIRECT THREATS



Loss of Capacity of Warddeken



Loss of Bininj Knowledge and Languages



Social and Community Problems

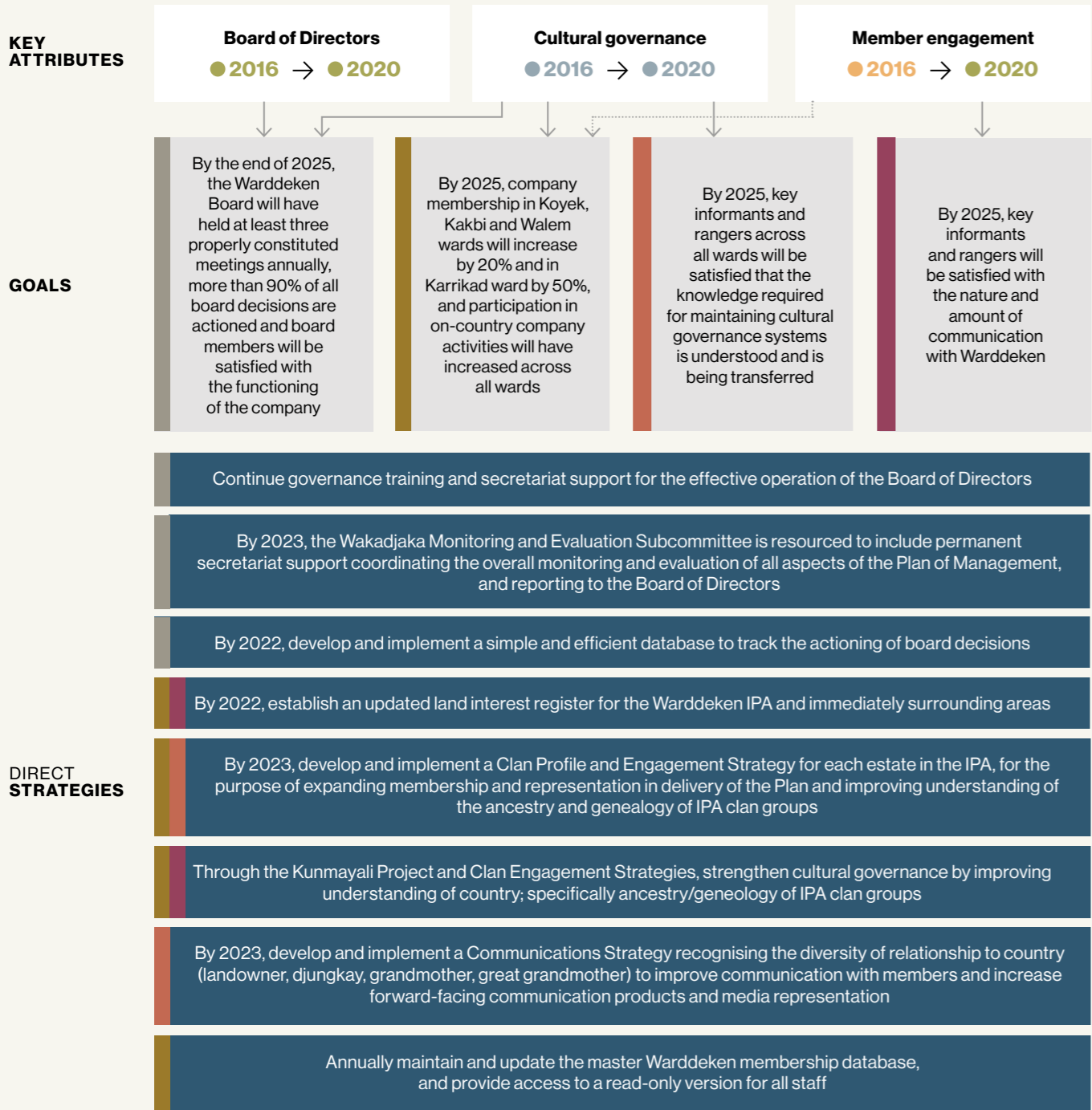


ACHIEVEMENTS UNDER 2016-2020 PLAN

- Doubled our membership to more than 420 members
- Increased consultations with Traditional Owners from all wards of the IPA, particularly members from Karrikad and Walem wards
- Increased engagement with diaspora Traditional Owners
- Establishment of Wakadjaka Monitoring and Evaluation Subcommittee
- Increased financial revenue allowing organisational and program growth
- Achieved quorum at every Board of Directors meeting and AGM

Governance

2016 → 2020



KEY ● TO BE DETERMINED ● POOR ● FAIR ● GOOD ● VERY GOOD ■ DIRECT ■ SUPPORTING





‘We must work together with balanda, listen to each other and share each others’ ways of doing things.

Like in this IPA here, there has been lots of meetings, talking together, learning about things and this has made us stronger’

— Hagar Bulliwana



ASSET 12

Kunred dja Durrkmirri

Communities and Livelihoods





To meet the vision of our professors and achieve all we want to see for the kuwarddewardde, it is important that Nawarddeken are able to live on country. As the only organisation based in the kuwarddewardde, the capacity of Warddeken to provide diverse and engaging employment opportunities that allow people to remain on country is a major factor in the sustainability of outstation communities.

Within the IPA are eight outstation communities, with permanent ranger bases at Kabulwarnamyo, Manmoyi and Mamardawerre. There are other communities within the IPA that are seasonally occupied, including Marlkawo and Kumarrirrbang. Many of the people living in these communities work for the company as rangers, cultural advisors, administration staff or for the Nawarddeken Academy school.

Ranger work enables Nawarddeken to maintain connections to our estates, utilise our cultural skills and practices and maintain our customary knowledge. Living on our customary estates not only improves health, wellbeing and livelihood opportunities, it also represents an efficient way of conserving Australia's natural and cultural heritage.

Healthy communities are impacted by practical support for outstations such as housing and road maintenance, and access to reliable power and water. Residents of outstation communities face barriers in accessing services other Australians take for granted, for example healthcare, education, communications and access to food and other consumer goods. For many years now, government policy has not prioritised outstation communities, and life for bininj has become more difficult.

Warddeken has stepped in to improve access and supply of some of these services so that more people, particularly families with children, can permanently reside or spend more time on the kuwarddewardde. The most significant outcome in this space is the establishment

of three registered independent community schools (Nawarddeken Academy) at Kabulwarnamyo, Manmoyi and Mamardawerre. However, Warddeken is not a funded essential service provider (Kabulwarnamyo is the exception) and so can only play a limited practical role in terms of housing and essential services. We do however remain deeply committed to advocating for the rights of outstation residents.

Food security has been an ongoing issue for kuwarddewardde communities, and a major achievement under the previous Plan of Management was securing funding for a fortnightly food charter plane to each community, where people are able to order food from a local supermarket and freight costs are covered.

THE MAJOR DIRECT THREATS



Loss of Capacity of Warddeken



Loss of Support for Outstations



Empty Country

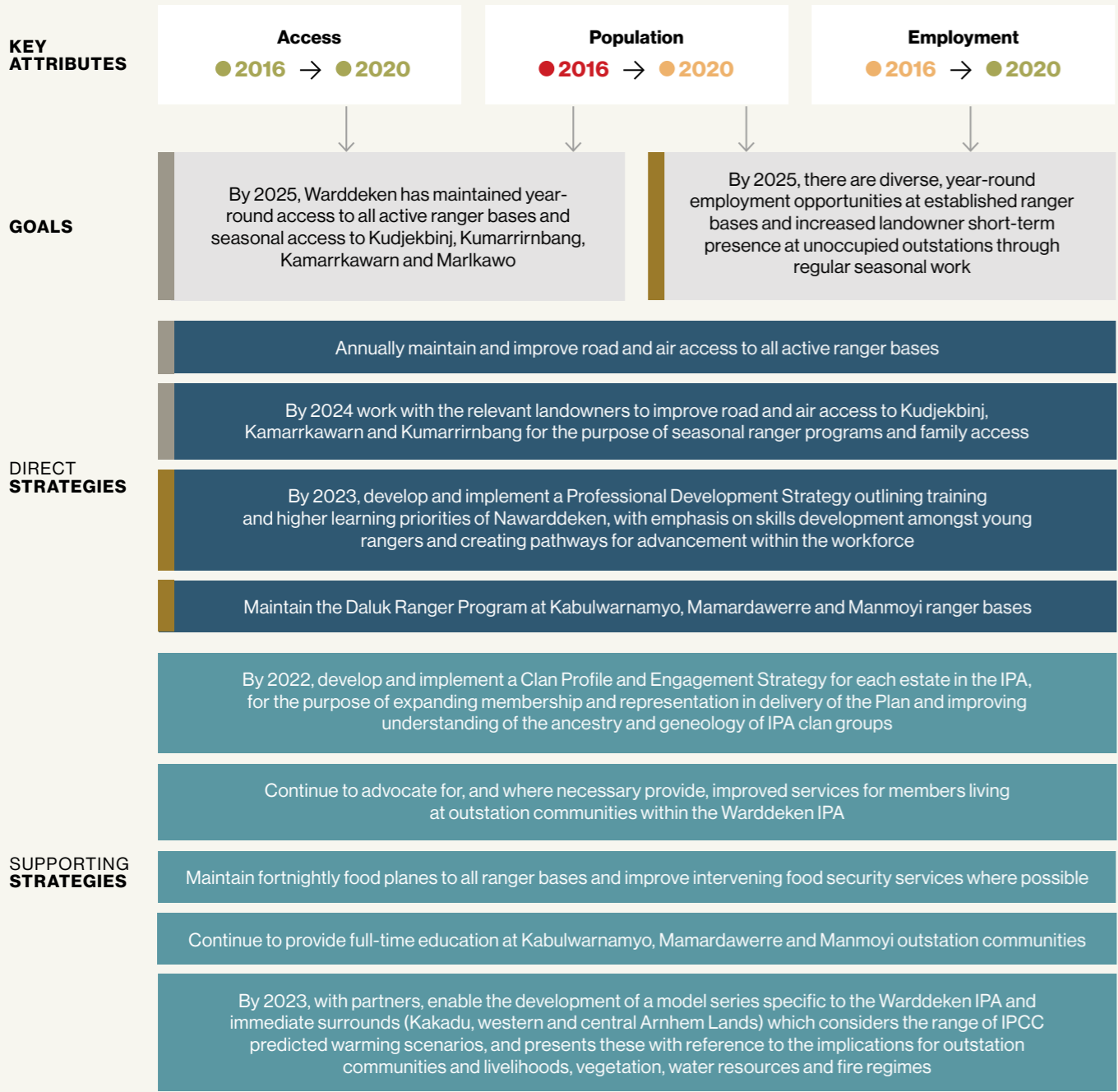


ACHIEVEMENTS UNDER 2016-2020 PLAN

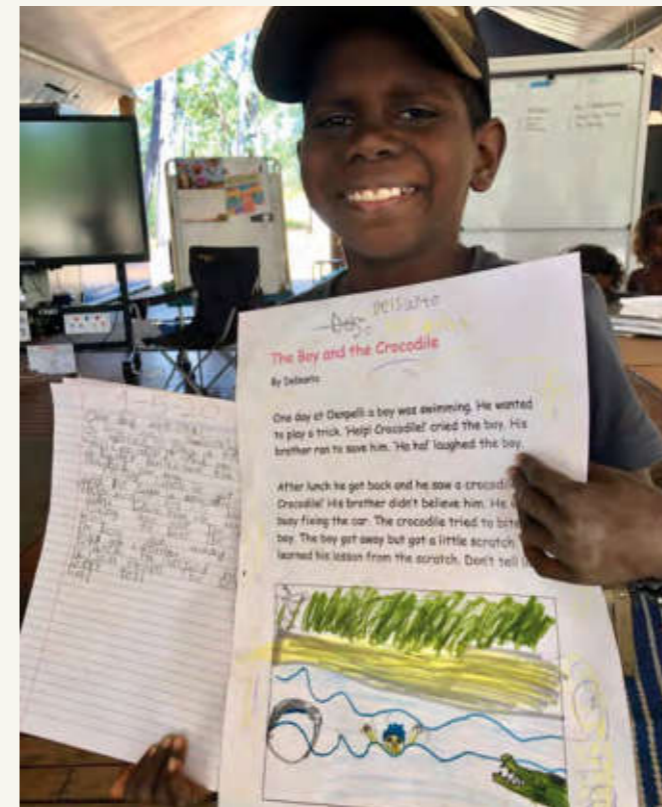
- Employment doubled from ~100 people each year to ~200 per year
- Ranger base established at Mamardawerre offering full time employment
- Facilitated fortnightly food plane for each ranger base allowing bininj to buy fresh food and groceries
- Established the Nawarddeken Academy, a registered independent school delivering education to children living at outstation communities



Kunred dja Durrkmirri Communities and Livelihoods



KEY ● TO BE DETERMINED ● POOR ● FAIR ● GOOD ● VERY GOOD ■ DIRECT ■ SUPPORTING



‘We have a good feeling living out bush. It’s good for our wellbeing, our psychological health. When we put our children out here and they all grow up here, it’s a good feeling. It’s here they learn about Aboriginal knowledge; about who we are.’

— Ross Guymala



‘This will leave our older generations feeling proud and happy, seeing us, the next generation taking over working to lift up and develop our lives and country. All of this social health is also based on the use of our own Aboriginal knowledge and practices on our country. Looking after country also has positive social and community outcomes.’

— Stuart Guymala

KEY THREATS

KEY THREATS

NABANG KABOLKWARREWON

NABANG KABOLKWARREWON

Threats, or threatening processes, are the things that negatively impact our assets and reduce their overall health. The threats addressed in this Plan of Management were chosen based on consultations with our members and rangers, who see firsthand the impacts of these threatening processes on country.





There are a number of threats to the health of the Warddeken IPA that impact our ability to live and work on country, such as loss of biodiversity and loss of support for homeland communities. By acknowledging these problems, we can then design strategies to address them, to ensure that future generations of Nawarddeken may continue to reside, visit and work in the kuwarddewardde.

Other threats directly endanger the health and wellbeing of Nawarddeken people, such as a loss of cultural knowledge and the breakdown of social and community health. These threats are just as important - although often even more difficult - to address.

Some threats such as weeds and feral animals are recognised by western science as significant, and there are national threat abatement plans that can inform our strategies. However, other threats are specific to the Warddeken IPA and Nawarddeken people, and require local solutions.

In this section we describe each threatening process, and outline our goals and strategies to reduce their impact on asset health. There have been some changes to our threats to improve the structure of the plan and to reflect a maturing in our understanding on how best to strategically tackle these challenges.



THREAT 1
Loss of Knowledge and Language



THREAT 3
Loss of Support for Outstations



THREAT 5
Wildfire



THREAT 7
Feral Animals
Buffalo



THREAT 9
Weeds
Aquatic WONS



THREAT 11
Weeds
Environmental Weeds



THREAT 13
Social and Community Problems



THREAT 15
Unauthorised Access



THREAT 2
Empty Country



THREAT 4
Loss of Capacity of Warddeken



THREAT 6
Feral Animals
Cats & Cane Toads



THREAT 8
Feral Animals
Pigs



THREAT 10
Weeds
Grassy Weeds



THREAT 12
Saltwater Crocodiles



THREAT 14
Climate Change

THREAT RANKING

To determine and prioritise threats to the IPA, the Wakadjaka Subcommittee and a range of senior and knowledgeable bininj were extensively consulted regarding the impacts of each threatening process.

We then worked to establish threat rankings according to the scope (size), severity (seriousness) and irreversibility (permanence) of the impact of each threat.

Ranking threats helps us prioritise our work programs over the life of this plan. This includes jobs that maintain

or improve asset health, as well jobs that reduce or remove threats. Threats can be a problem for one or more of our assets. By taking a strategic approach to mitigating the impact of threats on our country and culture, we will make all our assets healthier.

Ranking threats also allows us to track the impact of our work programs. By the completion of this plan, we want to ensure that none of the threats have become worse, and ideally that some threats are actually ranked lower.



THREAT RANKING

	TBD	LOW	MEDIUM	HIGH	VERY HIGH
Loss of Knowledge and Language					
Empty Country					
Loss of Support for Outstations					
Loss of Capacity of Warddeken					
Wildfire					
Feral Animals Cats & Cane Toads					
Feral Animals Buffalo					
Feral Animals Pigs					
Weeds Aquatic WONS					
Weeds Grassy Weeds					
Weeds Environmental Weeds					
Saltwater Crocodiles					
Social and Community Problems					
Climate Change					
Unauthorised Access					

VERY HIGH

The threat has potential or is likely to destroy or remove part or all of an asset if the current situation or rate of damage continues. If this happens, it may be impossible to improve the health of the asset.

HIGH

The threat is likely to cause serious damage to part or all of an asset if the current situation or rate of damage continues. If this happens, it would be very expensive and difficult to improve the health of the asset.

MEDIUM

The threat is likely to cause moderate damage to all or part of an asset if the current situation or rate of damage continues. If this happens, it would be relatively costly but possible to improve the health of the asset.

LOW

The threat is likely to cause a limited amount of damage to part or all of an asset if the current situation or rate of damage continues. If this happens, it would require minimal effort and resources to improve the health of the asset.

THREAT 1

Loss of Knowledge and Language



The loss of the unique knowledge, skills and language of Nawarddeken remains a critical threat to continued health and good management of the kuwarddewardde. Our knowledge and languages are not found anywhere else on earth - they help define us as Nawarddeken and have been passed from generation to generation for tens of thousands of years.

We consider languages and knowledge to be essential to our personal health and wellbeing, as well as to the health of country, and under this Plan we will implement new direct initiatives to combat their rate of loss. If bininj knowledge and languages are lost there will be major ramifications for our people - ceremonies and rituals linked to the health of plants and animals will no longer be carried out. We will not know the stories, songs and sacred places of the kuwarddewardde. Younger generations will not know the essential components of how to manage their estates according to customary responsibilities. We will forget the skills we need to live and thrive on country.

It is of the utmost importance to us that young bininj grow strong in cultural practice and understanding. This includes skills such as how to identify the unique animal and plant species of the kuwarddewardde, how to make items of material culture such as spears, message sticks and woven baskets, how to carry out cultural practices such as calling out to old people when visiting new country, and where and how to collect and prepare bush foods.

Our old people continue to worry that younger generations are not learning and practicing enough bininj knowledge and languages. Many parents themselves admit to not supporting their children

enough in learning and practicing more bininj knowledge and languages. Living in a modern world, it is easy to be distracted by other things such as social media and the trappings of town life.

We acknowledge that some bininj knowledge and languages have already been lost to time, and that as we move forward, we cannot teach every young person every aspect of customary knowledge. However, in the course of creating this plan, we have identified the things that are most important to us, and these will be our focus for the next five years.

We feel strongly that more needs to be done to urgently reduce the loss of customary knowledge and languages, and to find a balance between bininj culture and living in the modern world.

Under this threat we will work to reduce knowledge loss by recovering and repatriating cultural data that is currently inaccessible to landowners, improving community access to cultural data, and creating resources that improve engagement with knowledge-related media. Importantly, we will also establish processes and build our internal capacity to record more knowledge, and store it well in our custom database.

THE MAJOR AFFECTED ASSETS



Bininj Kunmayali
Knowledge



Bininj Kunwok
Languages



Djang
Sacred Sites



Kunwarddebim
Rock Art



Manwurrk
Fire



Mayh
Stone Country Fauna



Manme dja Manrakel
Food and Medicine Plants



Kukku
Freshwater Places



Anbinik
Allosyncarpia Forests



Kundulk Andjuhdjumbung Kukorlh
Arnhem Sandstone Shrublands



Kunred dja Durkmirri
Communities and Livelihoods

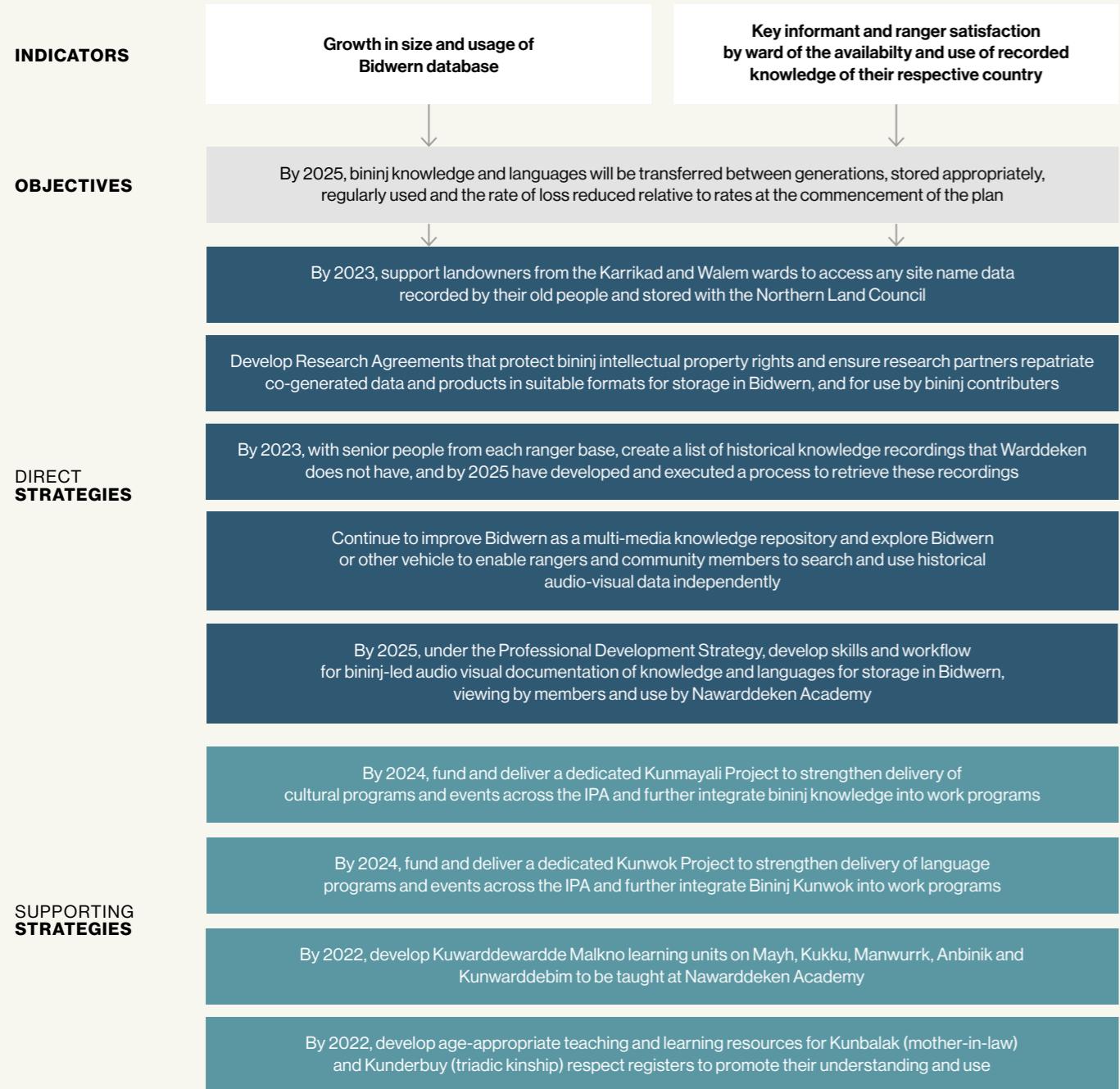


Governance





Loss of Knowledge and Language

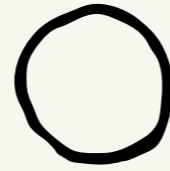


KEY ● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



THREAT 2

Empty Country



One of the most significant threats to the health of the kuwarddewardde continues to be empty country, with the majority of clan estates across the IPA considered to be ‘orphaned’, or empty of people. Despite a major increase in ecological and cultural programs aimed at reconnecting Nawarddeken with lonely country, there is still much work for us to do in addressing this threat.

For a number of years from the nineteen sixties to eighties, very few Nawarddeken lived or spent time on country in the kuwarddewardde, which was considered too remote and too rugged compared to the mission towns of Gunbalanya and Maningrida in the north, and Barunga and Bulman to the south. Because of this, customary responsibilities associated with sacred sites, ceremonies, rock art and other cultural places were not carried out, causing serious concern amongst older cultural leaders.

During this period of time when the physical connection between people and country was severed, the challenges of a post-colonial world came to bear upon the landscape. In the absence of early burning, frequent and intense wildfires now raged uncontrolled over huge areas. Feral animals were left unchecked, resulting in a build up of large herds that caused damage to cultural sites, Anbinik forests and wetlands. Scientists attribute the significant decline in small mammal populations largely to the combination of these uncontrolled wildfires and the increasing damage caused by feral animals.

Returning to country has resulted in better management for both culture and conservation. There are fewer wildfires. Thousands of feral

animals are now removed every year. Cultural places are managed and djang are visited. Establishing our three ranger bases within the IPA has been a critical step in this process, and the work of our company has ensured that some Nawarddeken families can remain on their clan estates, either through camping seasonally or permanently living.

However, despite our ongoing efforts, the kuwarddewardde is a large area and many parts of it remain empty. Over the life of this Plan of Management, we will connect diaspora landowners with their country through a range of environmental and cultural programs, with a focus on members from Walem and Karrikad wards. We are also working towards the long-term occupation of currently empty areas of the IPA, with a view to establish a new seasonal base in the Karrikad ward. Making sure the kuwarddewardde is not empty is expensive, however we are committed to continuing to create more opportunities for bininj to live and work on country.

THE MAJOR AFFECTED ASSETS



Bininj Kunmayali
Knowledge



Bininj Kunwok
Languages



Djang
Sacred Sites



Kunwarddebim
Rock Art



Manwurrk
Fire



Mayh
Stone Country Fauna



Manme dja Manrakel
Food and Medicine Plants



Kukku
Freshwater Places



Anbinik
Allosyncarpia Forests



Kundulk Andjuhdjumbung Kukorlh
Arnhem Sandstone Shrublands



Kunred dja Durkmirri
Communities and Livelihoods

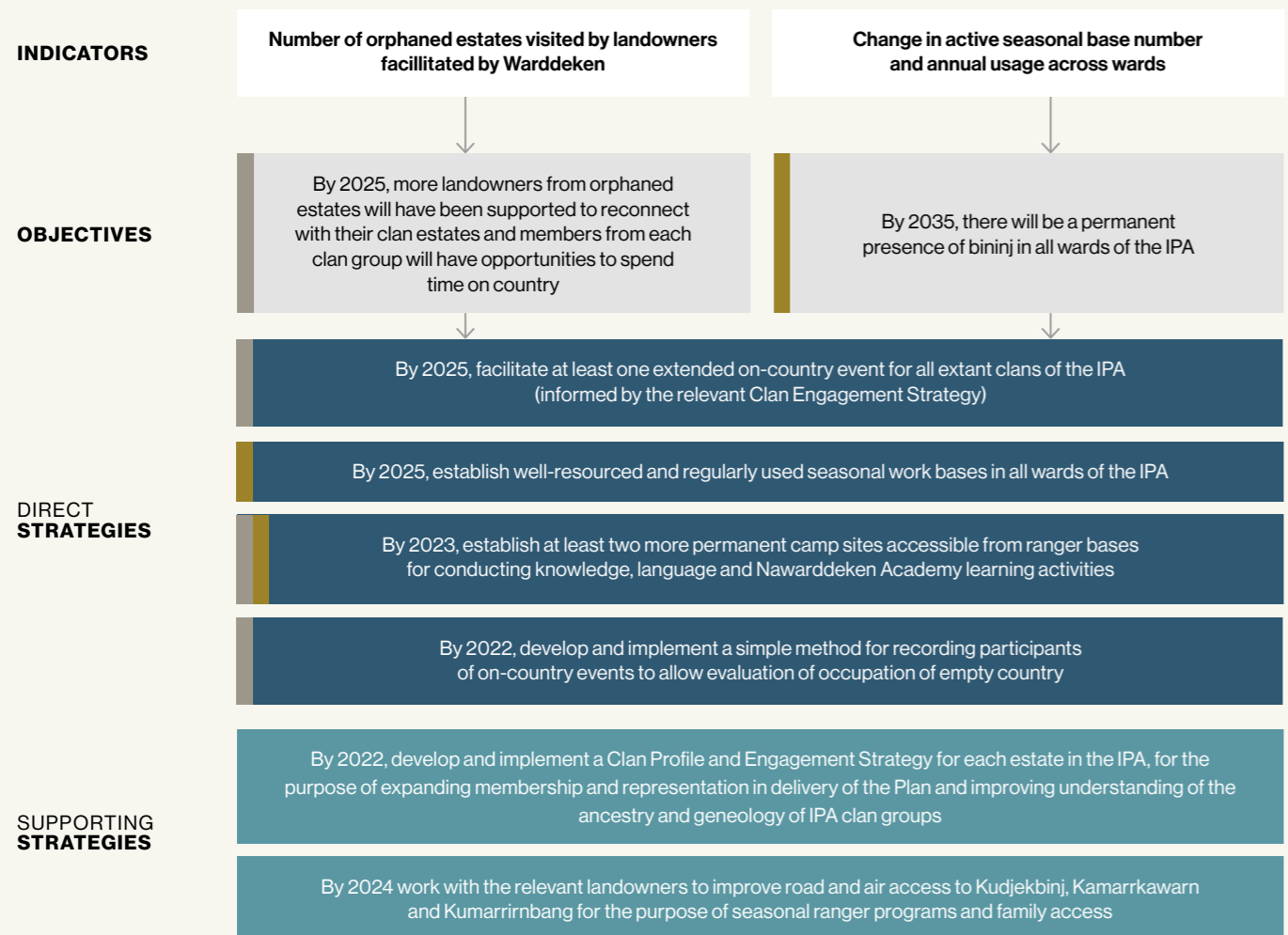


Governance

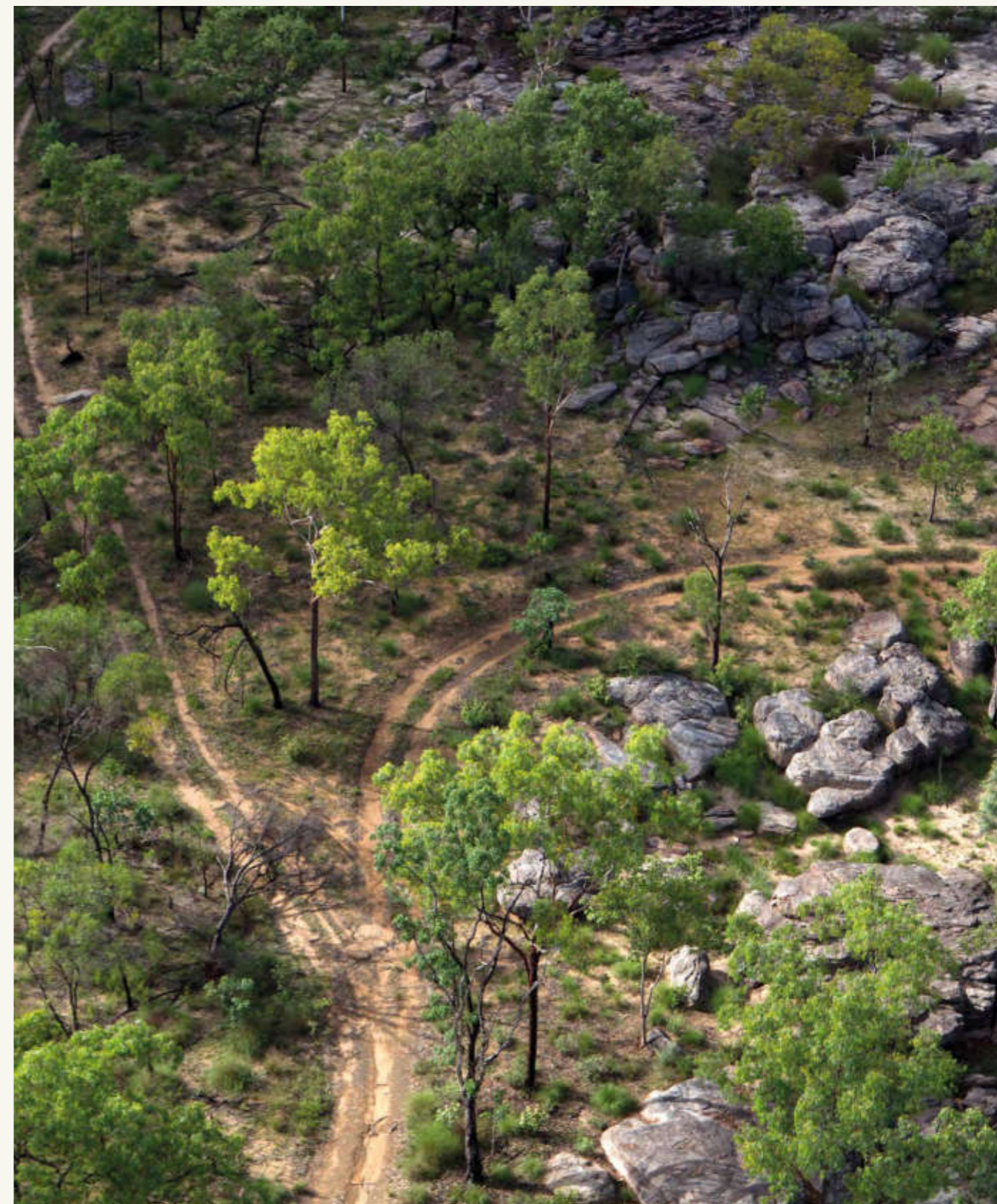


Empty Country

2016 → 2020



KEY ● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



THREAT 3

Loss of Support for Outstations



We are one of only a handful of organisations in Australia based at outstation (or homeland) communities, and are deeply committed to supporting and advocating for Nawarddeken who choose to live on country, outside of major townships.

We recognise that life in the bush is even more challenging than ever for Indigenous people and, where possible, we work alongside communities to increase access, improve environmental health and ensure sustainable futures on country.

The level of support for outstations is strongly linked to the threats of empty country and loss of bininj knowledge and languages. The loss of support for outstations means fewer bininj are able to return, live or spend time in the kuwarddewardde, which impacts on the overall health of people and place.

Government funding for outstations at local, state and federal levels has been in decline for decades - particularly since the federal government's 'intervention' into remote indigenous communities in 2007.

The continual deterioration of resources has placed even more pressure on Warddeken to fill the gaps left behind by underfunded service providers and successive governmental policy failures.

Services taken for granted by most Australians such as health services, telecommunications and affordable groceries are often difficult to secure for outstation residents, and over the years there have been times when these services have ceased altogether, often without warning. Warddeken has been able to address these issues through advocacy and liaising with service providers, installing telephones and NBN internet

services at each ranger base (including dedicated community phone lines) and crucially, addressing food security for outstation residents. This was achieved by securing philanthropic funding to provide a fortnightly 'tucker run' – food planes to transport fresh produce and groceries to each ranger base (where families pay for their own shopping and Warddeken covers prohibitive freight costs).

Of the four permanently occupied outstations in the Warddeken IPA, Warddeken now operates ranger bases at three – Kabulwarnamyo, Manmoyi and Mamardawerre, and offers full-time work to residents of the fourth, Marlkawo. Over the life of this Plan, we will improve road and air access to three additional seasonally occupied IPA communities of Kudjekbinj, Kamarrkawarn and Kumarrirrbang.

Each ranger base is remote and requires specific access, infrastructure and facilities to enable rangers to continue their work of managing the IPA and looking after the kuwarddewardde. Warddeken are the registered Homelands Service Provider for Kabulwarnamyo, and we work closely with Demed Aboriginal Corporation who provide services for the people of Mamardawerre, Manmoyi and other communities within the IPA. However, Warddeken cannot be responsible for providing all the support for all of the outstations within the IPA, as this is not our core business; the company provides support that is directly related to managing the IPA.



THE MAJOR AFFECTED ASSETS



Bininj Kunmayali
Knowledge



Djang
Sacred sites



Governance



Bininj Kunwok
Languages



Kunred dja Durkmirri
Communities and livelihoods



Loss of Support for Outstations



INDICATORS

Landowner perspectives on housing, infrastructure and services at outstations in the IPA

OBJECTIVES

By 2025, there will be increased support for bininj to live and work on outstation communities within the IPA relative to the commencement of the plan (housing, infrastructure and essential services)

DIRECT STRATEGIES

Continue to advocate for, and where necessary provide, improved services for members living at outstation communities within the Warddeken IPA

Maintain fortnightly food planes to all ranger bases and improve intervening food security services where possible

Continue to provide full-time education at Kabulwarnamyo, Mamardawerre and Manmoyi outstation communities via the Nawarddeken Academy

SUPPORTING STRATEGIES

By 2023, with partners, enable the development of a model series specific to the Warddeken IPA and immediate surrounds (Kakadu, western and central Arnhem Lands) which considers the range of IPCC predicted warming scenarios, and presents these with reference to the implications for outstation communities and livelihoods, vegetation, water resources and fire regimes

KEY ● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



THREAT 4

Loss of Capacity of Warddeken



In order to reach our vision, Warddeken must have the capacity to meet the ambitions of this Plan of Management and beyond. As landowners, we have a responsibility to manage the kuwarddewardde because it is our home; caring for it is a part of who we are as Bininj Nawarddeken. Having declared the Warddeken IPA, we also have a responsibility to manage the kuwarddewardde and its many threatened and endemic plants, animals and ecological communities in accordance with international standards.

Since establishing Warddeken in 2007, we have successfully secured extensive resources, funding and skilled staff to deliver our core work activities alongside a growing number of specialised projects. Key to this has been our partnership with Karrkad Kanjdji Trust, a philanthropic organisation dedicated to supporting the country, culture and communities of west Arnhem Land. This partnership has bolstered Warddeken's ability to deliver flagship programs such as the Mayh Species Recovery Project, the Kunwarddebim Project and the Nawarddeken Academy.

However, the health of the kuwarddewardde faces many challenges that will be costly to address, and we must continue to increase our capacity to allow us to rise and meet these challenges. Although Warddeken is presently in a strong financial position with excellent governance, the loss of capacity remains a key existential threat, as any reduction in resources would have a direct impact on our ability to deliver all of the programs outlined in this plan.

To continue on the trajectory toward our vision, we must invest in the capacity of our workforce through directing additional resources towards education and training, as well as by supporting rangers to identify and achieve personal goals. Also important is the recruitment of dedicated and skilled support staff and maintaining high levels of staff retention, to guarantee robust institutional knowledge.

A loss of capacity would ultimately affect each and every asset and threat within this plan. To make sure we retain the capacity as an organisation to implement this plan, we will actively take steps to ensure Warddeken maintains strong systems of corporate and cultural governance, transparent financial records and the ability to attract high levels of government and philanthropic funding.

THE MAJOR AFFECTED ASSETS

- | | |
|--------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|  Bininj Kunmayali
Knowledge |  Manme dja Manrakel
Food and Medicine Plants |
|  Bininj Kunwok
Languages |  Kukku
Freshwater Places |
|  Djang
Sacred Sites |  Anbinik
Allosyncarpia Forests |
|  Kunwarddebim
Rock Art |  Kundulk Andjuhdjumbung Kukorlh
Arnhem Sandstone Shrublands |
|  Manwurrk
Fire |  Kunred dja Durkmirri
Communities and Livelihoods |
|  Mayh
Stone Country Fauna |  Governance |





Loss of Capacity of Warddeken



INDICATORS

Percentage of ranger positions held by daluk rangers	Audit and reporting requirements satisfied
Percentage of total employment hours worked by daluk rangers	Funding of core plan elements established, ongoing or to completion as required
Average retention of support staff	Wakadjaka Subcommittee overall evaluation of the implementation of the Plan of Management
Average retention of ranger staff	

OBJECTIVES

By 2025, Warddeken will have a supportive and inclusive workplace where the average length of staff retention is increased on 2020 levels, and employment opportunities for men and women are equal

By 2025, Warddeken will have implemented the majority of this Plan of Management with sustainable financial and human resources

DIRECT STRATEGIES

Investigate, develop and secure from the public and private sectors ongoing operational funds necessary to implement this Plan of Management

Maintain the Daluk Ranger Program at Kabulwarnamyo, Mamardawerre and Manmoyi ranger bases

By 2023, Warddeken will have suite of resources available to staff to enable safe, informed, efficient and culturally respectful operations for the delivery of this Plan of Management (including Health and Safety Plan, Program Operations Guides and Clan Profile and Engagement Strategies)

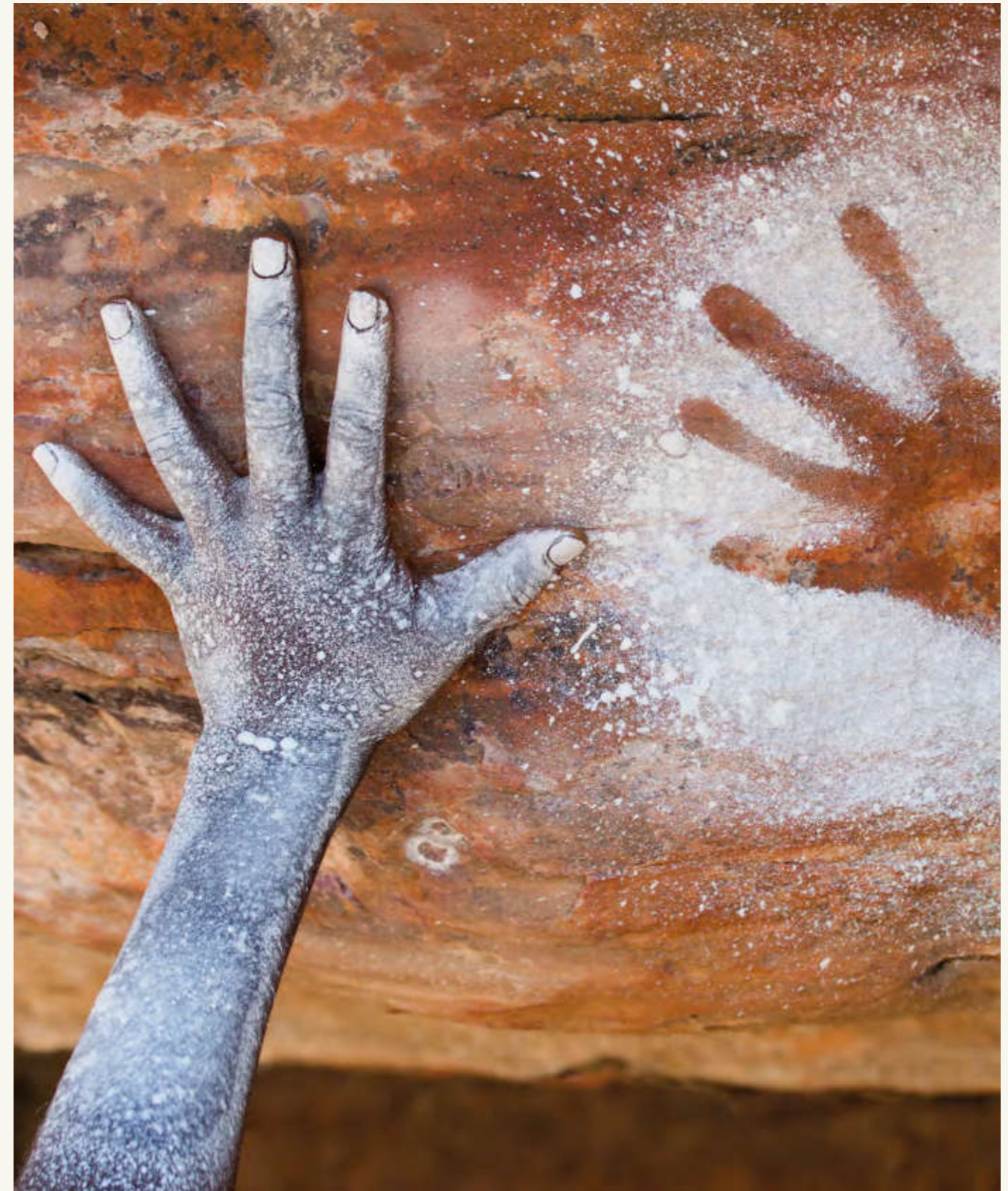
SUPPORTING STRATEGIES

By 2023, develop and implement a Professional Development Strategy outlining training and higher learning priorities of Nawarddeken, with emphasis on skills development amongst young rangers and creating pathways for advancement within the workforce

By 2023, the Wakadjaka Monitoring and Evaluation Subcommittee is resourced to include permanent secretariat support coordinating the overall monitoring and evaluation of all aspects of the Plan of Management, and reporting to the Board of Directors

Continue to advocate for, and where necessary provide, improved services for members living at outstation communities within the Warddeken IPA

KEY ● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



THREAT 5

Wildfire



Wildfires are one of the key threatening processes of the kuwarddewardde, impacting the health of our assets in many ways. As it gets hotter and drier at the end of wurrkeng (late dry season), fires switch from being a critical landscape management tool to a threat, and the cool, trickling burns of yekke (early dry season) become large, uncontrollable and destructive wildfires.

When Nawarddeken moved away from the kuwarddewardde, large, frequent and intense wildfires, usually the result of late season lightning strikes, replaced the careful and deliberate use of fire.

Our professors and western scientists were worried about the serious damage wildfires were doing to the kuwarddewardde's natural and cultural heritage. The impact of wildfires on the biodiversity of the stone country includes a reduction in the size and composition of Anbinik forest patches, loss of plant species, and the loss of habitat, refuges and food sources for native animals, including species of cultural and conservation significance.

Wildfires are closely linked by severity and scope to other threats such as feral animals. The combined impact of these threats is thought to be a major factor in the decline of small mammal populations. Wildfires can also damage rock art and other important cultural sites, including djang, and reduce the availability and diversity of bush foods.

Warddeken rangers were pioneers of wildfire suppression in Arnhem Land as a mechanism to prevent megafires and protect fire sensitive cultural sites and vegetation communities. Warddeken's firefighting is

'dry', meaning rangers do not use water to fight fires, but rather use techniques such as installing mineral earth breaks that act as a barrier to pull up fires, through removing combustible fuel.

Increasingly, wildfire suppression has become a major component of our annual work program, with firefighting campaigns running from August to December. Over the life of the 2016- 2020 Plan, rangers and staff fought hundreds of wildfires, working tirelessly throughout the late dry season.

The most effective way of reducing the impact of wildfires is through improved delivery of early dry season burning activities. Although Warddeken's fire management program is very strong, there is still scope to improve fine-scale burning and enhance the network of fire breaks protecting the IPA.

Unfortunately, the impacts of climate change have already led to longer, hotter dry seasons, and it is anticipated that wildfire activity will increase as weather conditions worsen. To address this we will continue to equip rangers with the skills necessary to operate safely and effectively on fire fronts, and be prepared to upscale our firefighting efforts as required.



THE MAJOR AFFECTED ASSETS



Manwurrk
Fire



Kundulk Andjuhdjumbung Kukorlh
Arnhem Sandstone Shrublands



Mayh
Stone Country Fauna



Governance



Anbinik
Allosyncarpia Forests



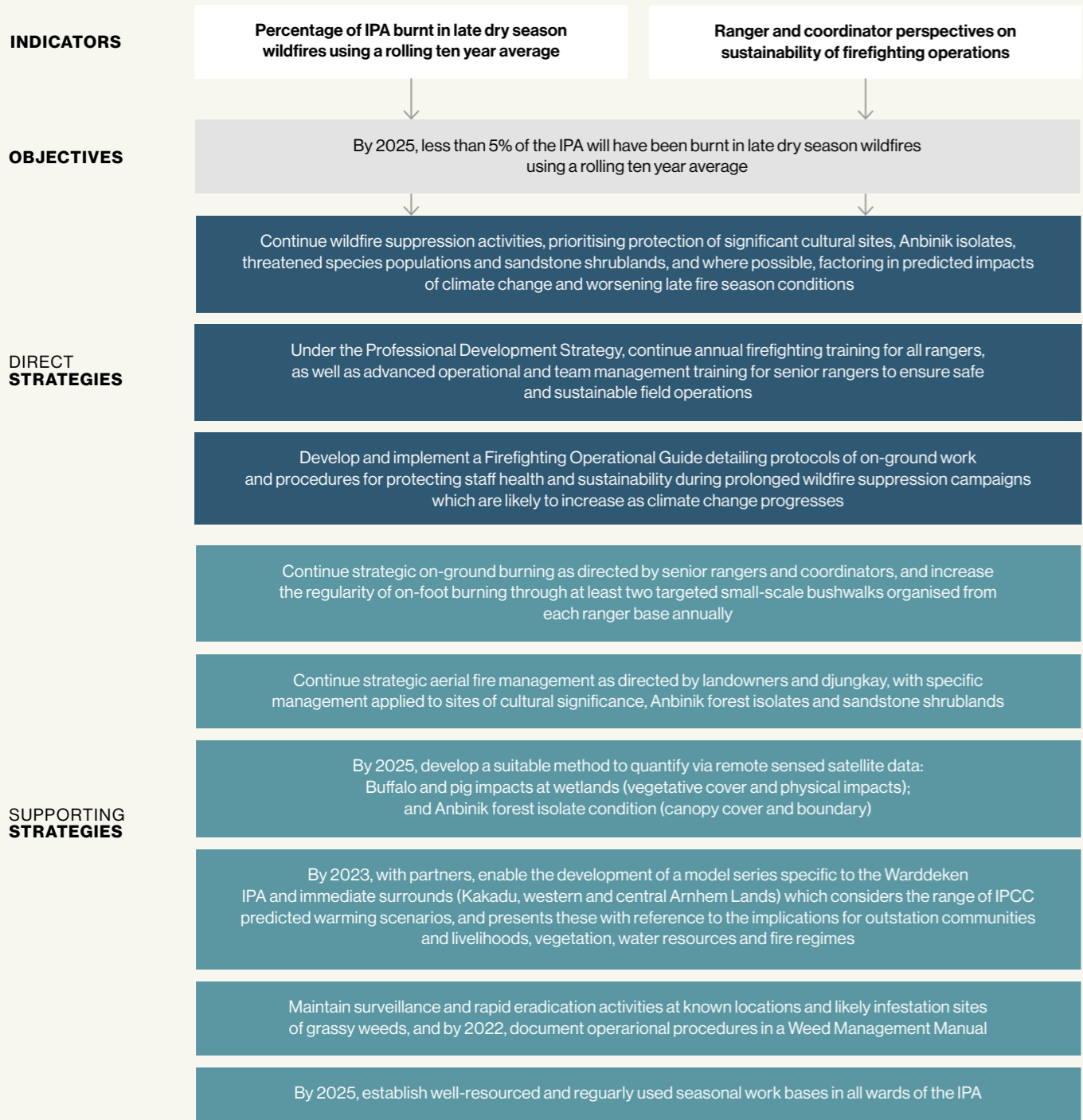
Kunred dja Durkmirri
Communities and Livelihoods



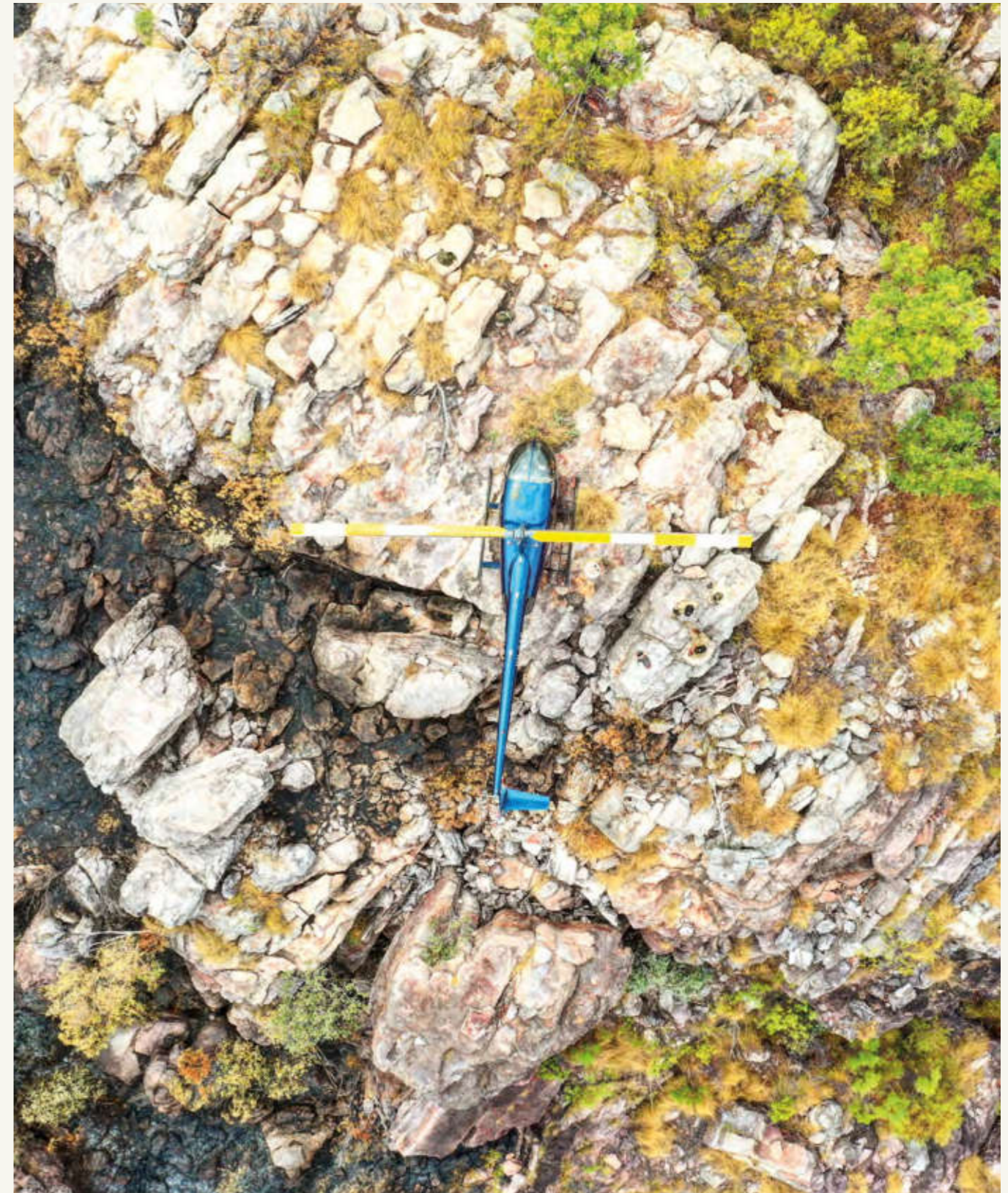
Kunwarddebim
Rock Art

Wildfire

2016 → 2020



KEY ● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



THREAT 6

Feral Animals

Cats and Cane Toads



There are numerous introduced animals threatening the health of our assets and the overall health of the kuwarddewardde. Certainly, the most difficult of these to manage are feral cats (*Felis catus*) and cane toads (*Rhinella marina*). These species are widespread in the IPA and northern Australia and they pose a serious and challenging threat to our native biodiversity.

Cats and cane toads occur in many parts of Australia and are listed as Key Threatening Processes under national environmental legislation. Both cats and cane toads have a significant impact on a number of animal populations, in particular small mammals, many of which are of great cultural and conservation significance.

Together with other threats such as wildfire and buffalo, they are thought to be responsible for the widespread decline in small mammals across northern Australia, including in the kuwarddewardde.

Cats are extremely efficient hunters and prey on many different types of animals, particularly small mammals, birds and reptiles. They are solitary, have a large home range and predominantly hunt at night. These factors, combined with the kuwarddewardde landscape, make feral cats difficult to control. Despite concerted efforts at trapping and culling, we have accepted that managing cats at a landscape scale is not viable at this point in time.

Cane toads, including their eggs and tadpoles, have toxic defences that kill the animals that prey on them. Carnivorous animals such as the northern quoll, goannas and snakes are particularly at risk. Cane toads also eat other frog species, fish and other small animals. They impact on our livelihoods by reducing the availability of bush foods, and infest waterways making the water unsuitable for drinking.

It is unlikely that cats or cane toads can be eradicated or even controlled, and therefore our work is focused on reducing their impact. Under this Plan of Management, we will begin targeted management of cats around identified stronghold populations of critically endangered small mammals, executing strategic and targeted culling activities.

Community awareness of the threats these feral animals pose is important, as is keeping up-to-date with and contributing to the body of ongoing research around these acute threats to kuwarddewardde fauna.

THE MAJOR AFFECTED ASSETS



Mayh
Stone Country Fauna



Kukku
Freshwater Places



Kundulk Andjuhdjumbung Kukorlh
Arnhem Sandstone Shrublands





Feral Animals

Cats and Cane Toads



INDICATORS

Wakadjaka Subcommittee perspective on this threat within the key programs of fire, feral animal and native species management

OBJECTIVES

Warddeken will continue to mitigate the impacts of feral cats by maintaining delivery of fire and buffalo management programs. If warranted, site and species-specific actions may be applied

DIRECT STRATEGIES

Remain alert and responsive to new developments for reducing populations of cats and cane toads

Continue strategic aerial fire management as directed by landowners and djungkay, with specific management applied to sites of cultural significance, Anbinik forest isolates and sandstone shrublands

Continue strategic on-ground burning as directed by senior rangers and coordinators, and increase the regularity of on-foot burning through at least two targeted small-scale bushwalks organised from each ranger base annually

Using contemporary and traditional scientific knowledge, create materials and decision-making tools for senior landowners with respect to key species, including their interaction with fire and feral animal management programs

SUPPORTING STRATEGIES

Each year, conduct at least one aerial cull of feral animals in areas where landowners have granted permission, and work with landowners for other clan estates to explore options for expanding the aerial feral animal control program

By 2024, as part of the Professional Development Strategy, establish a bininj-led ferals management team to perform on-ground shooting, aerial culling, butchering, meat packaging and delivery to senior landowners (within and external to IPA)

By 2023, the Mayh Species Recovery Program has informed the development, resourcing and implementation of at least two site-specific small mammal management plans designed with Traditional Owners to improve the health of defined areas of high ecological and cultural importance

KEY ● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



THREAT 7

Feral Animals

Buffalo



Buffalo (*Bubalus bubalis*) cause a multitude of problems for country and people, in the Warddeken IPA and more broadly across northern Australia. Both natural and cultural values are damaged by buffalo. For Nawarddeken this includes destruction and fouling of important freshwater places, damaging bush food crops and spreading weeds.

Introduced to the Northern Territory in the early 19th century, buffalo quickly established feral populations in coastal and freshwater habitats. On a landscape scale, feral buffalo were largely unmanaged except for a culling program (BTEC) in the 1980s to combat the spread of the pathogens Brucellosis and Tuberculosis. In Arnhem Land, an aerial survey in 2014 estimated a buffalo population of a minimum of around 100 000 animals, representing a 232% increase since 1998 when the effect of the BTEC culling program had faded.

Though buffalo remain a source of fresh meat and play a role in food security for many people in the Warddeken IPA, the negative consequences of such large populations are now a source of much concern.

Over the longer-term and more broadly within the savanna and plateau landscapes, there is growing evidence that the grazing pressure of buffalo reduces habitat structural integrity and has likely contributed to the ongoing catastrophic decline of small mammals. Buffalo destroy sacred sites by trampling and fouling, and important rock art sites by rubbing on the paintings. Buffalo also pose a safety threat to people on country, both in their day-to-day lives and when performing specific cultural maintenance activities.

Since the establishment of the Warddeken IPA, landowners and rangers have been managing buffalo populations. Aerial and ground based culling are performed annually in a growing number of clan estates and the improvement in the freshwater assets is clear. Some estates have been extensively aerially culled since 2008, and the improvement in the health of freshwater ecosystems within those estates is substantial.

Over the years, there has been an increase in landowners requesting assistance from the ranger program in controlling this threat, as the benefits of buffalo management have become more widely understood. Within the next five years, Warddeken is seeking to consolidate and build on this program with continued culling, development of an in-house fully accredited aerial culling team and improving the monitoring of culling impacts across the IPA to consider even the most remote places.

THE MAJOR AFFECTED ASSETS



Djang
Sacred Sites



Manme dja Manrakel
Food and Medicine Plants



Kunwarddebim
Rock Art



Kukku
Freshwater Places



Mayh
Stone Country Fauna



Anbinik
Allosyncarpia Forests



Feral Animals
Buffalo



INDICATORS

Remote sensed assessment of physical impacts of buffalo and pig at majority of wetlands in the IPA

OBJECTIVES

By 2025, there will be no measureable increase in feral animal disturbance of upland wetland sites and culturally significant wetlands for the majority of clan estates, relative to the commencement of the plan

Each year, conduct at least one aerial cull of feral animals in areas where landowners have granted permission, and work with landowners for other clan estates to explore options for expanding the aerial feral animal control program

By 2025, Warddeken has approval to conduct feral animal management culls in 90% of clans within the Warddeken IPA

DIRECT STRATEGIES

By 2024, as part of the Professional Development Strategy, establish a bininj-led ferals management team to perform on-ground shooting, aerial culling, butchering, meat packaging and delivery to senior landowners (within and external to IPA)

By 2025, develop a suitable method to quantify via remote sensed satellite data: Buffalo and pig impacts at wetlands (vegetative cover and physical impacts); and Anbinik forest isolate condition (canopy cover and boundary)

By 2024, Warddeken is able to market the environmental offsets resulting from feral animal management programs

KEY ● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



THREAT 8

Feral Animals

Pigs



Feral pigs (*Sus scrofa*) are widespread in northern Australia, perpetuate a host of negative impacts and are notoriously difficult to manage. Pigs in the Warddeken IPA are widespread and often able to penetrate further into the highlands of the kuwarddewardde than buffalo. They cause significant fouling and damage to precious freshwater places through their densities and destructive foraging behaviour.

Pigs are omnivorous and eat a variety of foods that are valued by Nawarddeken. They can have substantial impact on underground vegetation (yams, rhizomes, waterlily culms), above ground vegetation including fruits and small wildlife such as the prized native turtles.

Pigs are not utilised by people living on country; their meat is rarely consumed and they are not hunted for any purpose other than removal at a local level.

At larger scales, pigs are very difficult to manage. Pigs produce multiple litters of 4-8 piglets a year which allow populations of pigs to increase easily. Unlike buffalo, their populations are not amenable to aerial culling as they can easily disappear into long grass and shrubbery. In northern Australia where native food is abundant, baiting has been of limited success though there have been promising recent advances.

Pigs present a significant management challenge in the Warddeken IPA. We will continue to cull pigs with both aerial and ground based programs, though we acknowledge the ultimate limitations of these methods. While we maintain a watching brief on better options

for broadscale pig management, the ranger bases will turn focus toward maintaining pig free zones at favoured freshwater food gathering, recreational and sacred sites.

Supported by in-house culling teams and a greater understanding of the areas of high pig impacts through improved remote monitoring, we will see progress on this problem within the next management period.

THE MAJOR AFFECTED ASSETS



Djang
Sacred Sites



Kunwarddebim
Rock Art



Mayh
Stone Country Fauna



Manme dja Manrakel
Food and Medicine Plants



Kukku
Freshwater Places



Anbinik
Allosyncarpia Forests





Feral Animals

Pigs



INDICATORS

Senior landowners living on country at ranger bases assessment of pig impacts

Remote sensed assessment of physical impacts of buffalo and pig at majority of wetlands in the IPA

OBJECTIVES

By 2025, landowners at ranger bases will be satisfied that feral pig impacts at on-ground monitored wetlands are reduced from 2020 levels

On a regular basis, cull pigs at wetlands most commonly used for food resources around ranger bases, including on-ground monitored wetlands

Each year, conduct at least one aerial cull of feral animals in areas where landowners have granted permission, and work with landowners for other clan estates to explore options for expanding the aerial feral animal control program

DIRECT STRATEGIES

By 2024, as part of the Professional Development Strategy, establish a bininj-led ferals management team to perform on-ground shooting, aerial culling, butchering, meat packaging and delivery to seniorland owners (within and external to IPA)

By 2025, develop a suitable method to quantify via remote sensed satellite data: Buffalo and pig impacts at wetlands (vegetative cover and physical impacts); and Anbinik forest isolate condition (canopy cover and boundary)

By 2024, Warddeken is able to market the environmental offsets resulting from feral animal management programs

By 2025, Warddeken has approval to conduct feral animal management culls in 90 % of clans within the Warddeken IPA

KEY ● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



WEEDS



Weeds

Aquatic Weeds of National Significance (WONS)



Weeds

Grassy Weeds



Weeds

Environmental Weeds

If the Warddeken IPA is to maintain a relatively weed free status, ongoing and consistent management efforts are required. When uncontrolled, weeds can spread rapidly by natural dispersal, vehicles and machinery, buffalo, cattle, horses and pigs. Missing even one season of management can have long lasting ramifications.

Similarly, different weeds have different environmental impacts and life histories, so a one-size-fits-all approach is not suitable. The historical weed management undertaken by Warddeken rangers accounted for this diversity and has been critical to protecting the kuwarddewardde from this threat.

Within the next five years we will build on these hard-won battle lines through the improvement of strategic long-term weed management programs and data collection processes with greater precision and specification. To do this, we must devise our efforts to address the three main categories of weeds in the IPA - Aquatic WONS, Grassy Weeds and Environmental Weeds.



THREAT 9

Weeds Aquatic WONS



Weeds of National Significance are identified by their invasiveness, potential for spread and environmental, social and economic impacts. Mikkinj Valley, part of the East Alligator River system in the north-western section of the IPA, has two aquatic WONS infestations that have compromised the ecological and subsistence value of the main water courses of the valley: the Giant Sensitive Plant or Mimosa (*Mimosa pigra*) and Salvinia (*Salvinia molesta*).

These species have been managed by Warddeken and partners for many years, however their continued persistence warrants greater focus. We are seeking to do this by again working with landowners and partners to develop, fund and deliver a bold Aquatic WONS 10-year containment and eradication strategy.

THE MAJOR AFFECTED ASSETS

- Manwurrk**
Fire
- Mayh**
Stone Country Fauna
- Kukku**
Freshwater Places



Weeds Aquatic WONS



THREAT 10

Weeds

Grassy Weeds



Invasive grassy weeds are not widespread in the IPA due to the ongoing efforts of Warddeken rangers, however they remain a serious threat to country and people. Grassy weeds will crowd out diverse native grasses that provide sustenance and shelter for a plethora of species and will cause burning at temperatures much hotter than native species.

The main grassy weeds of concern include the WONS Gamba Grass (*Andropogon gayanus*) and the Mission (*Cenchrus pedicellatus* and *C. polystachios*), Grader (*Themeda quadrivalvis*) and Para (*Urochloa mutica*) grasses. Maintaining surveillance for Gamba Grass has been, and will remain essential, over the life of the next plan.

THE MAJOR AFFECTED ASSETS



Manwurrk
Fire



Mayh
Stone Country Fauna

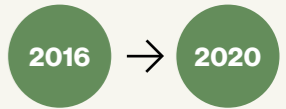


Manme dja Manrakel
Food and Medicine Plants



Weeds

Grassy Weeds



INDICATORS

Presence and extent of gamba grass in IPA

Occurrence and patch sizes of grassy weeds in the IPA

OBJECTIVES

Over the life of the plan, gamba grass will not become established in the Warddeken IPA, and the known occurrence of mission, grader and para grasses will remain the same or be reduced

DIRECT STRATEGIES

Maintain surveillance and rapid eradication activities at known locations and likely infestation sites of grassy weeds, and by 2022, document operational procedures in a Warddeken IPA Weed Management Manual

Improve community awareness and reporting of Grassy Weeds and their risks by annually printing posters, identification booklets and other educational materials and distributing to outstations and Nawarddeken Academy bases in the IPA

By 2022, develop and implement a method and mode of recording weed infestations and control efforts or use in all weed management activities, to enable annual reporting, monitoring and evaluation

Continue and where necessary expand weed management at outstations and associated key sites, and by 2022, document procedures in a Warddeken IPA Weed Management Manual

SUPPORTING STRATEGIES

By 2023, develop and implement a Professional Development Strategy outlining training and higher learning priorities of Nawarddeken, with emphasis on skills development amongst young rangers and creating pathways for advancement within the workforce

By 2025, there are diverse, year-round employment opportunities at IPA communities with ranger bases, and an increased short-term presence of landowners at unoccupied outstations through provision of regular seasonal work

By 2024, work with the relevant landowners to improve road and air access to Kudjekbinj, Kamarrkawarn and Kumarrirnbang for the purpose of seasonal ranger programs and family access

Annually maintain and improve road and air access to all active ranger bases

KEY



THREAT 11

Weeds

Environmental Weeds



There are a range of other weeds which are not in either of the other categories and that largely act to impact life on outstations and resource harvesting areas, particularly along riparian zones.

Included here are species such as Rattlepod (*Crotalaria pallida*) which can dominate roadsides, Mission Grass which increases fire risk in outstations and Hyptis (*Hyptis suaveolens*) which is spread by buffalo, pigs, vehicles and water and can take over riparian zones to the detriment of native food plants and fire regimes.

Managing this suite of weeds requires local and specific techniques, which we will document in an expanded Weed Management Manual along with ongoing training for rangers and improved procedures.

THE MAJOR AFFECTED ASSETS



Manwurrk
Fire



Mayh
Stone Country Fauna



Manme dja Manrakel
Food and Medicine Plants

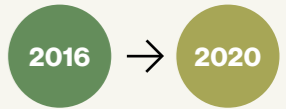


Kunred dja Durkmirri
Communities and Livelihoods



Weeds

Environmental Weeds



THREAT 12

Saltwater Crocodiles



Saltwater crocodiles (*Crocodylus porosus*) are found in the freshwater reaches of the many major river systems flowing throughout the Warddeken IPA, despite the coast being more than 30km away from the northern boundary. The growing number of these ancient predators is problematic for bininj living in the kuwarddewardde, and landowners in affected communities are concerned about safety and wish to see the threat addressed.

Saltwater crocodiles occur in wetlands across much of northern Australia. In 1971, the species was afforded protection in the Northern Territory as their numbers had declined significantly after decades of harvesting. Since then, saltwater crocodile numbers have increased considerably. Even though landowners support the continued protection of this species, they have become a threat to the safety of communities.

A number of IPA communities are located near permanent water bodies and bininj use them for a range of utilitarian and cultural reasons. Each year landowners have noticed an increasing presence of large saltwater crocodiles in rivers, and it is clear based on the knowledge of senior people that without management, the population is expanding its range.

We are worried that someone will be killed by a saltwater crocodile, as has happened elsewhere in recent years, and also about the impact of saltwater crocodiles on populations of culturally significant modjarrkki (freshwater crocodile).

The communities of Manmoyi on the Mann River and Mamardawerre on the Goomadeer River are the most

affected by the threat of saltwater crocodiles. We will continue to assist landowners to manage the threat of crocodiles as they deem necessary.

THE MAJOR AFFECTED ASSETS



Kunred dja Durkmirri
Communities and Livelihoods



Saltwater Crocodiles

2016 → 2020

INDICATORS

Percentage of key informants and rangers satisfied that the threat of saltwater crocodiles is being managed at regular swimming, fishing and food gathering places

OBJECTIVES

The threat posed by saltwater crocodiles to IPA landowners will be managed at an acceptable level

DIRECT STRATEGIES

Continue to strategically support IPA landowners to manage saltwater crocodiles in outstation communities where they pose a threat to livelihoods and safety

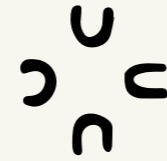
KEY

● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



THREAT 13

Social and Community Problems



Senior landowners are deeply worried about the social challenges experienced by many in their families and communities. The repercussions of colonisation persist as a web of connected and cascading impacts reaching out through the past 200 years, involving state sanctioned violence, systemic racism and abject disadvantage.

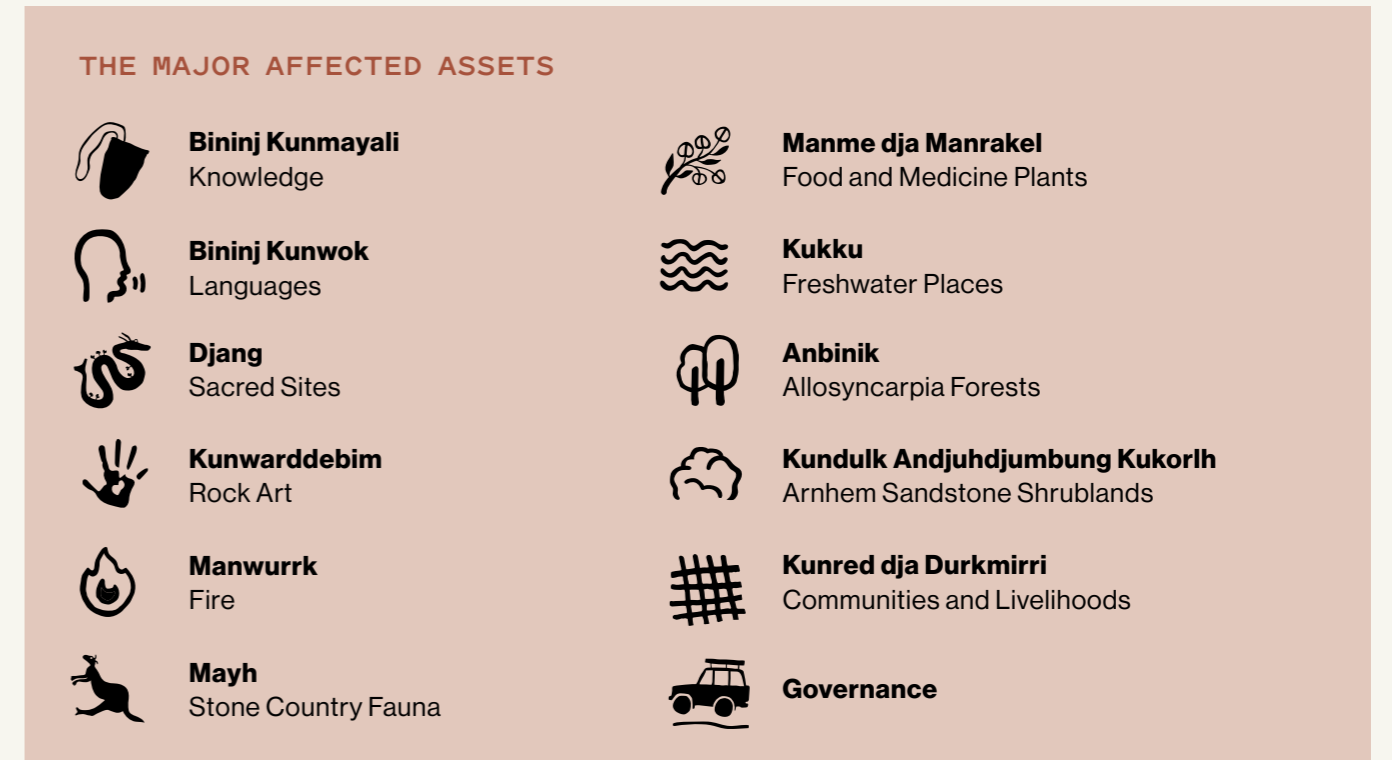
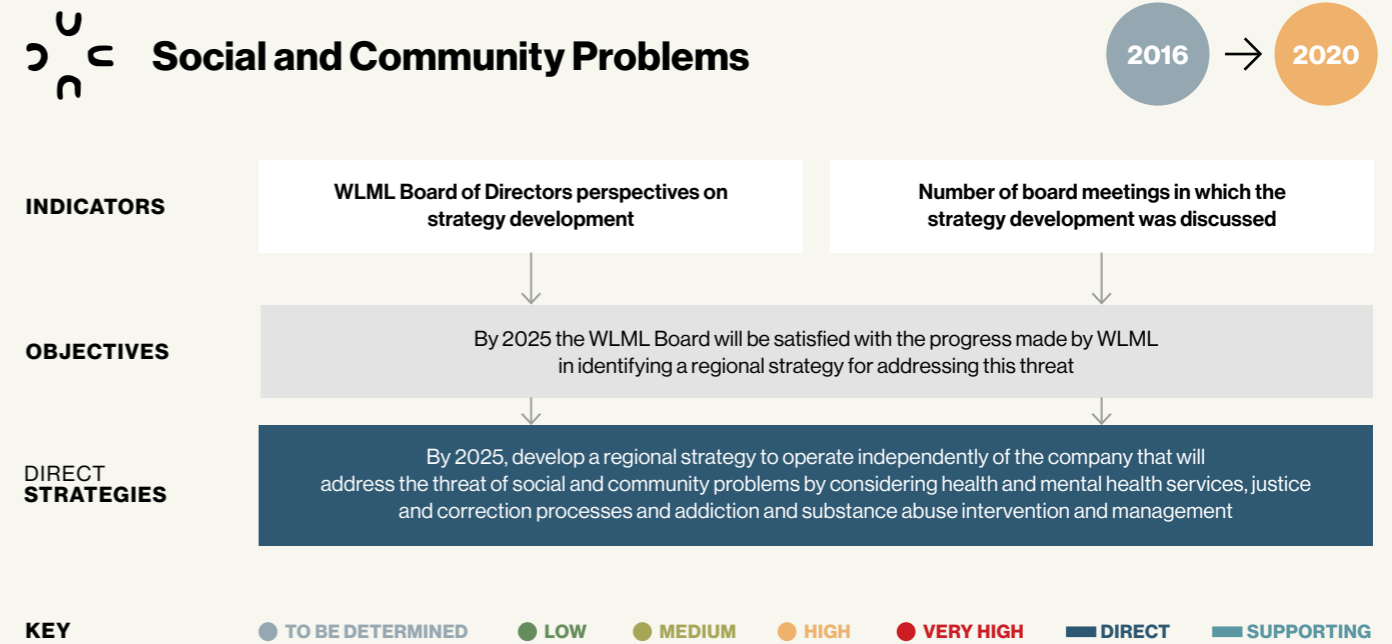
Compounding this is the fact that remote Aboriginal communities are among the most poorly serviced in Australia in terms of health, education, essential services and infrastructure. The hard reality is that many Nawarddeken live in poverty, and may not have access to basics such as consistent water, electricity and food.

Social problems of particular concern to Warddeken leaders are the proliferation of substance addictions and mental health disorders, and high rates of incarceration, recidivism and suicide. Despite a very clear need, there is an almost complete absence of mental health, addiction and healing support services within the west Arnhem region.

The incredible people of the Warddeken IPA and many other Aboriginal land management groups have delivered outstanding management of country in spite of these challenges. Evidence demonstrates the social benefits of working on country in the form of positive impacts on individuals, such as increased pride, feelings of self-worth, access to education, improved health outcomes and reduced rates of incarceration and recidivism.

However, there is only so much that falls within the remit of land management organisations such as Warddeken, and we acknowledge that it will require significant input from external agencies to address these major social challenges.

In the kuwarddewardde, senior people have identified social and community problems as a key threat to achieving the vision for the Warddeken IPA. With this in mind, Warddeken cultural leaders are committed to developing a strategy over the next five years to externally address the raft of social challenges facing Nawarddeken.



THREAT 14

Climate Change



Climate change is upon us, recently confirmed by the Sixth Assessment Report by the International Panel on Climate Change (IPCC). Since the middle of the 20th century, there has been a clear warming trend in the Northern Territory.

We have experienced more warmer-than-average years rather than cooler-than-average years, with two records for hottest years being set in the previous decade alone. Under current modeling, the Top End is set to warm between 0.5 and 1.4 degrees by 2030, though these are yet to be reassessed in light of the IPCC report and updated predictions.

Senior people validate these records with their lived experience, reporting that they have never experienced build-up and wet season temperatures like those of recent times. Of significant concern to bininj are the changing plant and animal responses to climate change.

What this will mean for the Warddeken IPA is uncertain, but recent trends provide some insight. It is likely we will continue to see changes the seasonal processes of plants and animals, potential reduction and/or change in timing and nature of rainfall to be more catastrophic events, accompanied by increasingly severe late season wildfire activity.

For residents of the IPA, life at outstations may become more difficult due to potentially fatal heat wave temperatures paired with already poor services and infrastructure.

In the face of uncertainty, adaptation will be key and as such there are still a number of actions that can be taken to prepare for future scenarios, in particular a bolstering of wildfire suppression campaigns in the late dry season.

THE MAJOR AFFECTED ASSETS



Manwurrk
Fire



Mayh
Stone Country Fauna



Manme dja Manrakel
Food and Medicine Plants



Kukku
Freshwater Places



Anbinik
Allosyncarpia Forests



Kundulk Andjuhdjumbung Kukorlh
Arnhem Sandstone Shrublands



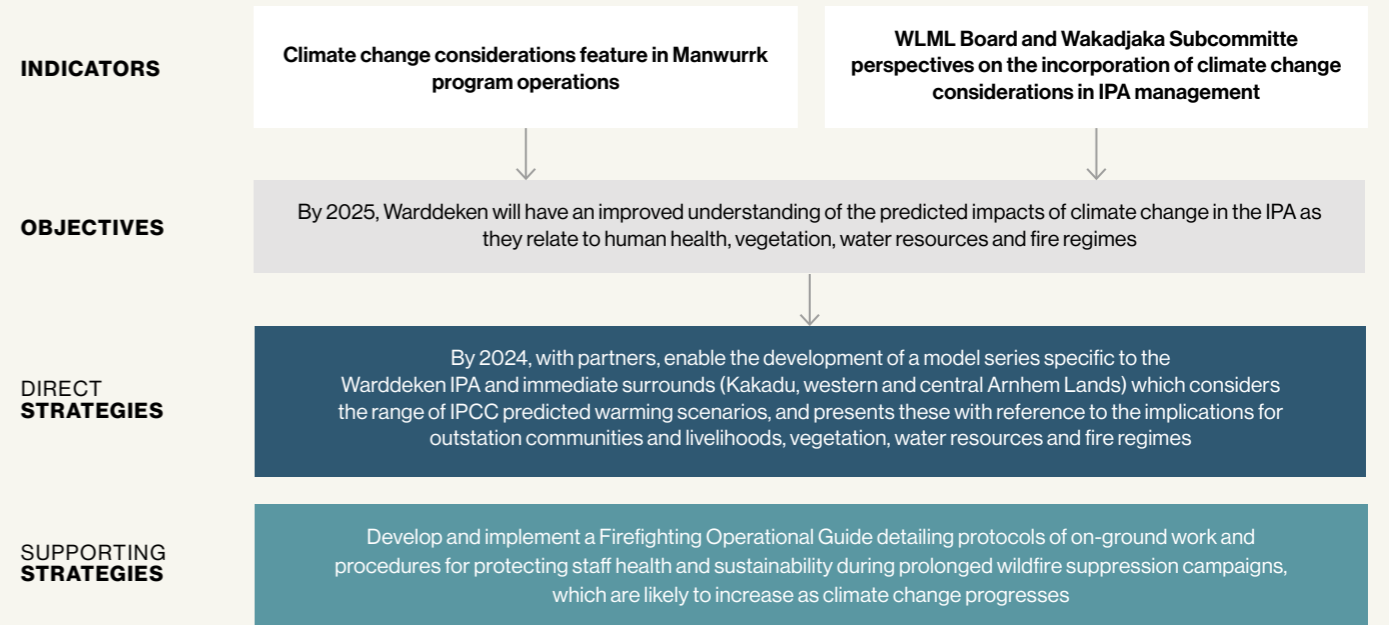
Governance



Kunred dja Durkmirri
Communities and Livelihoods



Climate Change



KEY ● TO BE DETERMINED ● LOW ● MEDIUM ● HIGH ● VERY HIGH ■ DIRECT ■ SUPPORTING



THREAT 15

Unauthorised Access



Remote west Arnhem Land, including the Warddeken IPA, is not immune to trespass by unauthorised persons. Bininj landowners are generous with access to their country if people adhere to the correct protocols, by seeking landowner permission and obtaining permits through the Northern Land Council. In recent times, rangers have observed increased signs of hunting expeditions by non-indigenous people who have not sought any approval to enter country.

Due to rugged terrain and limited road access into the IPA, these impacts are currently restricted to the northern clan estates adjacent the Arnhem Highway, which runs between the larger townships of Gunbalanya and Maningrida. However, as Warddeken expand our network of tracks and roads in coming years, more regions of the IPA will become vulnerable to illegal hunting and camping activities. Rangers and support staff must remain vigilant in looking out for such transgressions.

Senior landowners want to remind people that their country is not empty, and that there are both Australian and Bininj laws that must be adhered to. Some areas of country are deemed culturally dangerous and bininj fear for the physical safety of those who access such places.

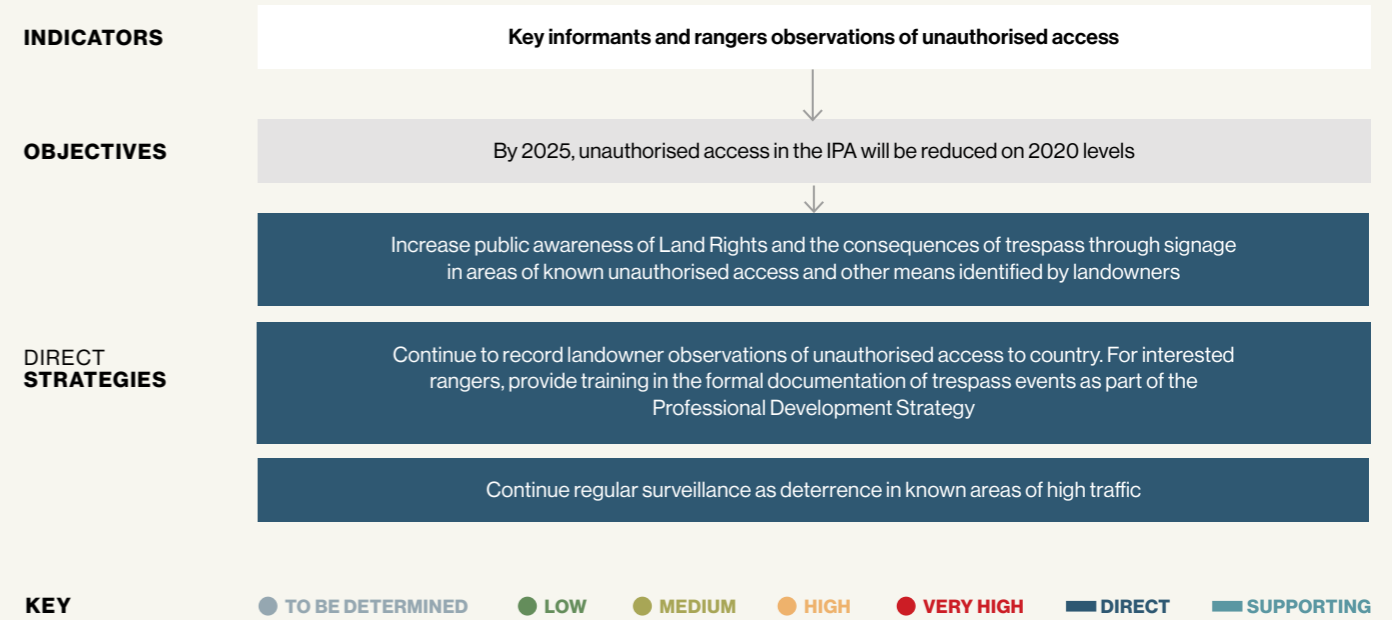
Through a program of education and presence, the Warddeken IPA will assist landowners to reduce illegal and unsafe access to country.

THE MAJOR AFFECTED ASSETS

-  **Djang**
Sacred Sites
-  **Kunred dja Durkmirri**
Communities and Livelihoods



Unauthorised Access



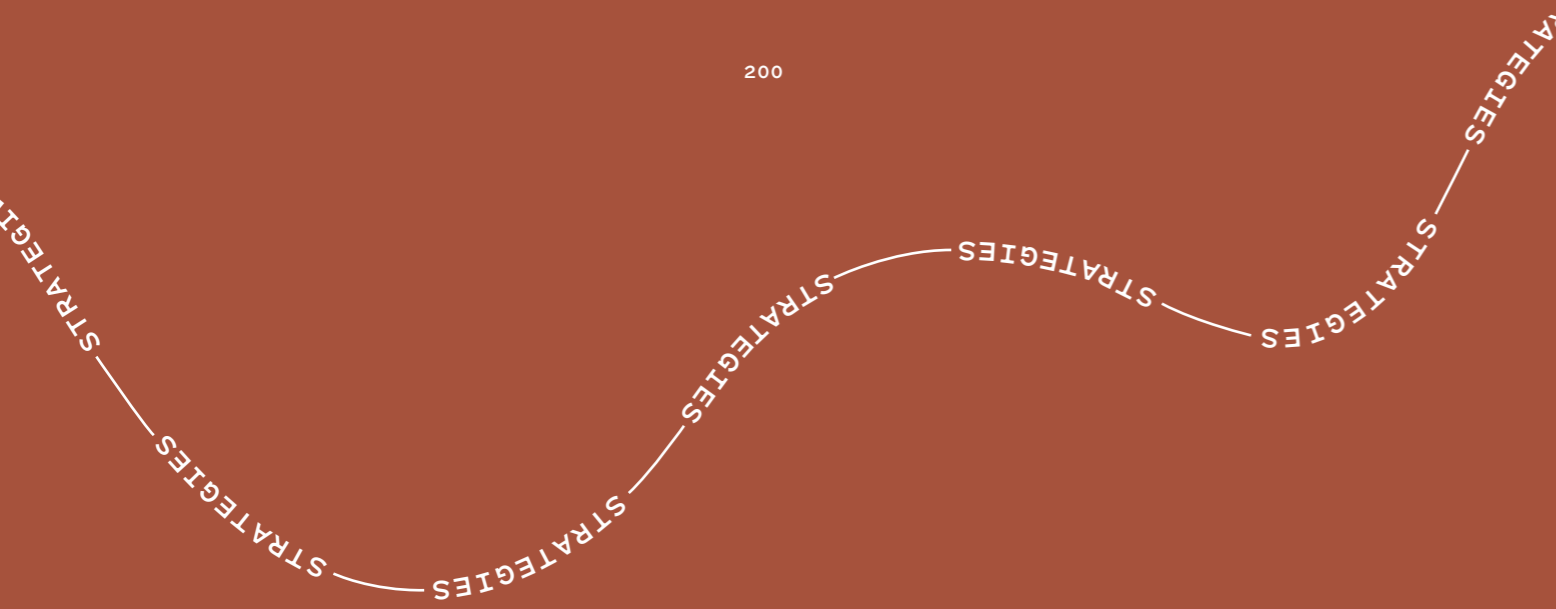


‘We like what’s happening with Warddeken and the direction it’s taking. Warddeken has made things change.

There’s been real action. It allows people to interact with cultural activities like hunting and provides opportunities for older people to be respected as teachers’.

— Leanne Guymala & Lewis Naborlhborlh





STRATEGIES

MANBUBUYIKA KARRIDURRMIRRI



Boyenkah manbuybuyika karridurrkmirri njaleken ngarridjare njalehnjale ngarrinahnan kamak dja ngarridjare nabang karridjirrkkan kaluk kore kanjdji.

Every day we do many jobs because we want our assets to be healthy and the threats to be reduced.

In this final section, we list all of the strategies, or jobs, that we have said we will undertake over the next five years to help us achieve our goals, objectives and ultimately, our vision. To better help rangers and support staff keep track of progress, we have listed the strategies by year.

We recognise that we have substantial work ahead of us to achieve all we have said we want to achieve under this Plan of Management. However, we are not daunted. Warddeken has always been an

ambitious company at the cutting-edge of cultural and environmental management, and we intend to remain at the forefront of our field. Add to this our staff of dedicated rangers and landowners passionate about their kunbolkngeykimuk (individual clan estates), and it is clear that this plan is a continuation of Warddeken's trajectory.

We hope this plan, and all we achieve under it, makes dabbarrabolk – our professors past and present – proud.



2021 STRATEGIES

By 2021, in collaboration with Nawarddeken Academy, identify at least three key locations of significant bush food indicator species, and monitor annually in the appropriate season for abundance and health of each food



2022 STRATEGIES

By 2022, implement a Djang Project to connect members with djang and document sites, focusing on intergenerational knowledge transfer, with visits to at least one djang site in each clan estate across the life of the Plan

By 2022, establish a Bininj Kunmayali First Aid Program delivering annual customary knowledge-based first aid training in concert with western first aid training, incorporating seasonal bush medicine harvesting, processing and use

By 2022, develop Kuwarddewardde Malkno learning units on Kunwarddebim, including: the importance and management of rock art, occupation and burial sites to be taught at Nawarddeken Academy

By 2022, develop Kuwarddewardde Malkno learning units on Manwurrk to be taught at Nawarddeken Academy, including: the cultural significance of early burning, how to make and carry fire and the history and importance of kangaroo fire drives

By 2022, develop Kuwarddewardde Malkno learning units on Mayh to be taught at Nawarddeken Academy, supporting senior rangers to teach cultural knowledge identified by landowners as a priority, including: learning to differentiate and name the different macropods; workshops on how to hunt, prepare, cook and learn the lore of key species; learning small mammal species using mayh monitoring images

By 2022, develop Kuwarddewardde Malkno learning units on Manme dja Manrakel to be taught at Nawarddeken Academy, including: identification, harvesting and preparation of food and medicinal plants

By 2022, in collaboration with Nawarddeken Academy, implement a cultural and ecological values monitoring program at 2-3 key freshwater sites at each ranger base, focused on availability and abundance of plant food and medicine resources

By 2022, develop Kuwarddewardde Malkno learning units on Kukku to be taught at Nawarddeken Academy, including: ecological and cultural importance of freshwater sites and contemporary and customary management practices

By 2022, engage a linguist to work with elders and cultural experts to document cultural knowledge related to Anbinik, and develop knowledge products for incorporation into the Nawarddeken Academy Kuwarddewardde Malkno curriculum

By 2022, develop a Kuwarddewardde Malkno learning unit on Anbinik to be taught at Nawarddeken Academy, including: ecological and cultural importance of Anbinik; contemporary and customary management practices; site visits/camps for rangers and students

By 2022, develop and implement a simple and efficient database to track the actioning of board decisions

By 2022, establish an updated Land Interest Register for the Warddeken IPA and immediately surrounding areas

By 2022, document standard operating procedures in a Warddeken IPA Anbinik Management Manual, including a template for reporting annual on-ground works

By 2022, develop and implement a simple method for recording participants in on-country events to allow evaluation of occupation of empty country

By 2022, Warddeken will have an updated understanding of the number and spatial extent of aquatic WONS in and directly adjacent to the IPA and a method for tracking control effort and change through time

Maintain surveillance and rapid eradication activities at known locations and likely infestation sites of grassy weeds, and by 2022, document operational procedures in a Warddeken IPA Weed Management Manual

2022 STRATEGIES CONTINUED

By 2022, develop and implement a method and mode of recording weed infestations and control efforts or use in all weed management activities, to enable annual reporting, monitoring and evaluation

Continue and where necessary expand weed management at outstations and associated key sites, and by 2022, document procedures in a Weed Management Manual

By 2022, develop age-appropriate teaching and learning resources for Kunbalak (mother-in-law) and Kunderbuy (triadic kinship) respect registers to promote their understanding and use



2023 STRATEGIES

By 2023, Warddeken will have an understanding of appropriate rock art conservation techniques and by 2025, two rangers from each ranger base will be skilled in these methods

By 2023, priority rock art and burial sites in clan estates with road access will be under the ongoing management of senior rangers and support staff from each ranger base

By 2023, publish the Warddeken IPA Rock Art Management Operational Guide

By 2023, the Mayh Species Recovery Program is expanded to include an additional project officer

By 2023, develop and implement a Communications Strategy recognising the diversity of relationship to country (landowner, djungkay, grandmother, great grandmother) to improve communication with members and increase forward-facing communication products and media representation

By 2023, the Mayh Species Recovery Program has informed the development, resourcing and implementation of at least two site-specific small mammal management plans designed with landowners to improve the health of defined areas of high ecological and cultural importance

By 2023, establish at least two more permanent camp sites accessible from ranger bases for conducting knowledge, language and Nawarddeken Academy learning activities

By 2023, Warddeken will have suite of resources available to staff to enable safe, informed, efficient and culturally respectful operations for the delivery of this Plan of Management (including Health and Safety Plan, Program Operational Guides and Clan Profile and Engagement Strategies)

By 2023, the Wakadjaka Monitoring and Evaluation Subcommittee is resourced to include permanent secretariat support coordinating the overall monitoring and evaluation of all aspects of the Plan of Management, and reporting to the Board of Directors

By 2023, develop and implement a Clan Profile and Engagement Strategy for each estate in the IPA, for the purpose of expanding membership and representation in delivery of the Plan and improving understanding of the ancestry and genealogy of IPA clan groups

By 2023, support landowners from the Karrikad and Walem wards to access any site name data recorded by their old people and stored with the Northern Land Council

By 2023, develop and implement a Professional Development Strategy outlining training and higher learning priorities of Nawarddeken, with emphasis on skills development amongst young rangers and creating pathways for advancement within the workforce

By 2023, with senior people from each ranger base, create a list of historical knowledge recordings that Warddeken does not have, and by 2025 have developed and executed a process to retrieve these recordings



2024 STRATEGIES

By 2024, fund and deliver a dedicated Kunmayali Project to strengthen delivery of cultural programs and events across the IPA and further integrate bininj knowledge into work programs

By 2024, fund and deliver a dedicated Kunwok Project to strengthen delivery of language programs and events across the IPA and further integrate Bininj Kunwok into work programs

By 2024, work with the relevant landowners to improve road and air access to Kudjekbinj, Kamarrkawarn and Kumarrirnbang for the purpose of seasonal ranger programs and family access

By 2024, Warddeken is able to market the environmental offsets resulting from feral animal management programs

By 2024, with partners, enable the development of a model series specific to the Warddeken IPA and immediate surrounds (Kakadu, western and central Arnhem Lands) which considers the range of IPCC predicted warming scenarios, and presents these with reference to the implications for outstation communities and livelihoods, vegetation, water resources and fire regimes

By 2024, Warddeken will work with landowners and other stakeholders to develop and fund a long-term (at least 10 years) Aquatic WONS Containment and Eradication Strategy

By 2024, as part of the Professional Development Strategy, establish a bininj-led ferals management team to perform on-ground shooting, aerial culling, butchering, meat packaging and delivery to senior landowners (within and external to IPA)

Continue IPA-wide camera monitoring program utilising customary and western knowledge systems, and in 2024 undertake a review of the program in the context of knowledge requirements and priorities



2025 STRATEGIES

By 2023, with senior people from each ranger base, create a list of historical knowledge recordings that Warddeken does not have, and by 2025 have developed and executed a process to retrieve these recordings

By 2023, Warddeken will have an understanding of appropriate rock art conservation techniques and by 2025, two rangers from each ranger base will be skilled in these methods

By 2025, the Mayh Species Recovery Program is recognised as a leading regional hub for appropriate, two-way, environmental research and engagement

By 2025, under the Professional Development Strategy, develop skills and workflow for bininj-led audio visual documentation of knowledge and languages for storage in Bidwern, viewing by members and use by Nawarddeken Academy

By 2025, facilitate at least one extended on-country event for all extant clans of the IPA (informed by the relevant Clan Engagement Strategy)

By 2025, establish well-resourced and regularly used seasonal work bases in all wards of the IPA

By 2025, develop a suitable method to quantify via remote sensed satellite data: Buffalo and pig impacts at wetlands (vegetative cover and physical impacts); and Anbinik forest isolate condition (canopy cover and boundary)

By 2025, develop a regional strategy to operate independently of the company that will address the threat of social and community problems by considering health and mental health services, justice and correction processes and addiction and substance abuse intervention and management

By 2025, Warddeken has approval to conduct feral animal management culls in 90% of clans within the Warddeken IPA

Continue annual firebreak maintenance and protective burning at 14 managed anbinik isolates, optimising landowner participation through camping events, and by 2025, add six new at-risk isolates to the management program



ANNUAL AND ONGOING STRATEGIES

Continue program of rock art site documentation following correct cultural protocol whereby three quarters of the extant clan estates in the IPA have been visited at least once within the life of the Plan

Document knowledge of significant rock art complexes with senior landowners through survey camps, site management and monitoring and family visits

Continue protective management of priority rock art complexes including developing and documenting procedures for care of burial sites

Conduct annual on-country events focussed on intergenerational knowledge exchange such as cultural camps, bushwalks and kangaroo fire drives, with at least one event in each ward each year

Expand the Bininj Place Name Project to all ranger bases and surrounding clan estates

Continue rock art data management and knowledge sharing, including archiving sites in Bidwern Information Management System and making priority site information available to senior rangers and coordinators

Continue strategic aerial fire management as directed by landowners and djungkay, with specific management applied to sites of cultural significance, Anbinik forest isolates and sandstone shrublands

Continue strategic on-ground burning as directed by senior rangers and coordinators, and increase the regularity of on-foot burning through at least two targeted small-scale bushwalks organised from each ranger base annually

Annually, conduct pre-season Manwurrk induction courses at each ranger base, including social and cultural history of fire, fire behaviour, using fire to protect Anbinik and Kunwarddbim, the significance of kangaroo fire drives and the contemporary operation of the IPA fire program

As part of the Professional Development and Training strategy, deliver training to rangers in all aspects of fire management operations including increased focus on technological capacity

Develop a Warddeken IPA Manwurrk Operations Manual, including processes for consultation, operations, pre-season induction and ongoing training requirements

Continue governance training and secretariat support for the effective operation of the Board of Directors

Continue wildfire suppression activities, prioritising protection of significant cultural sites, Anbinik isolates, threatened species populations and sandstone shrublands, and where possible, factoring in predicted impacts of climate change and worsening late fire season conditions

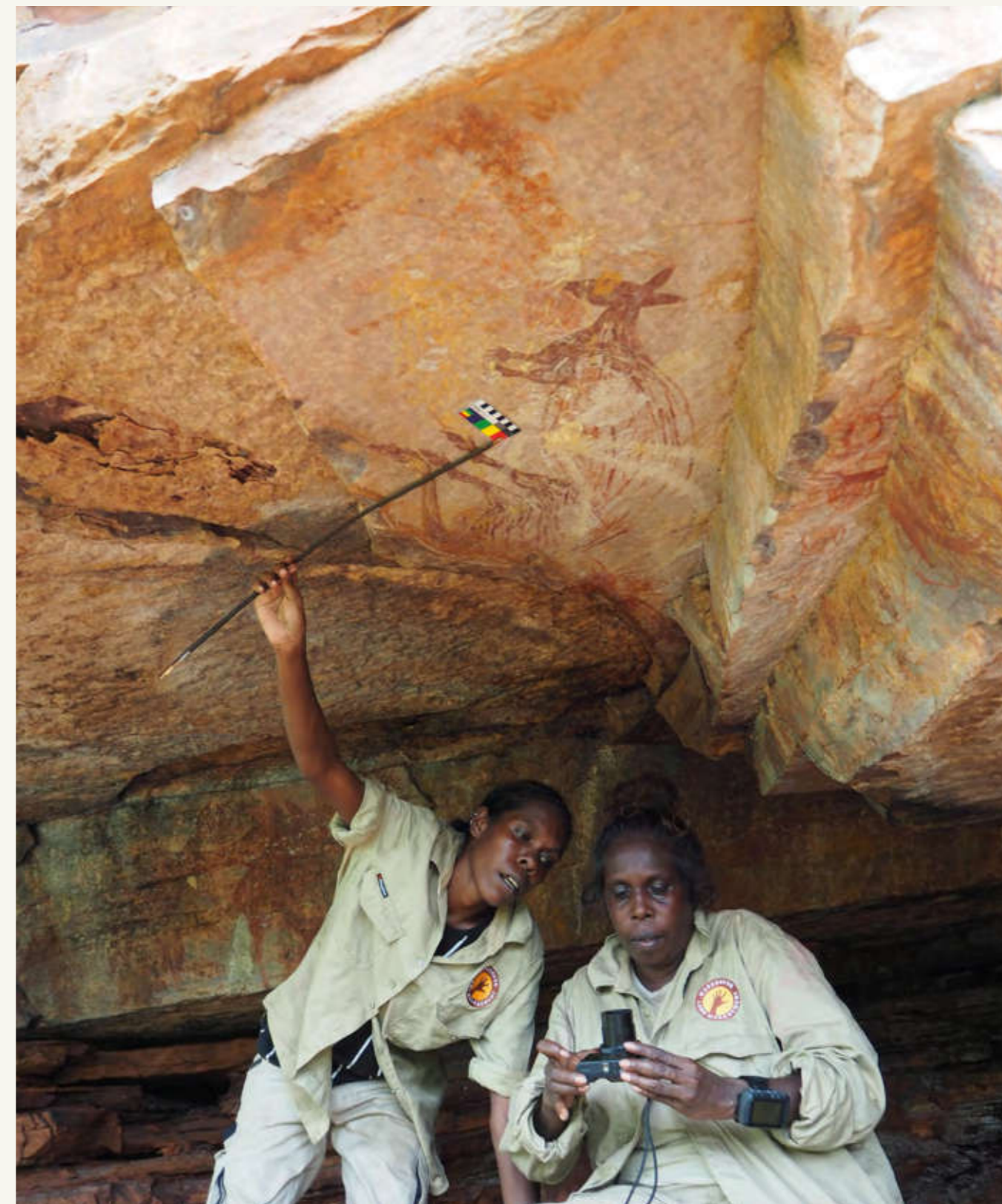
Through the Kunmayali Project and Clan Engagement Strategies, strengthen cultural governance by improving understanding of country; specifically, ancestry/genealogy of IPA clan groups

Annually maintain and update the master Warddeken membership database, and provide access to a read-only version for all staff

Annually maintain and improve road and air access to all active ranger bases

Maintain the Daluk Ranger Program at Kabulwarnamyo, Mamardawerre and Manmoyi ranger bases

Continue to improve Bidwern as a multi-media knowledge repository and explore Bidwern or other vehicle to enable rangers and community members to search and view historical audio-visual data independently



ANNUAL AND ONGOING STRATEGIES

Investigate, develop and secure from the public and private sectors ongoing operational funds necessary to implement this Plan of Management

Under the Professional Development Strategy, continue annual firefighting training for all rangers, as well as advanced operational and team management training for senior rangers to ensure safe and sustainable field operations

Remain alert and responsive to new developments for reducing populations of cats and cane toads

Each year, conduct at least one aerial cull of feral animals in areas where landowners have granted permission, and work with landowners for other clan estates to explore options for expanding the aerial feral animal control program

Improve community awareness and reporting of Grassy Weeds and their risks by annually printing posters, identification booklets and other educational materials and distributing to outstations and Nawarddeken Academy bases in the IPA

Annual management of aquatic WONS with landowners and other partners continues, and is aligned with the Aquatic WONS Containment and Eradication Strategy when developed

Continue to strategically support Bininj to manage saltwater crocodiles in outstation communities where they pose a threat to livelihoods and safety

Increase public awareness of Land Rights and the consequences of trespass through signage in areas of known unauthorised access and other means identified by landowners

Continue to record landowner observations of unauthorised access to country. For interested rangers, provide training in the formal documentation of trespass events as part of the Professional Development Strategy

Continue regular surveillance as deterrence in known areas of high traffic

Using contemporary and traditional scientific knowledge, create materials and decision-making tools for senior landowners with respect to key species, including their interaction with fire and feral animal management programs

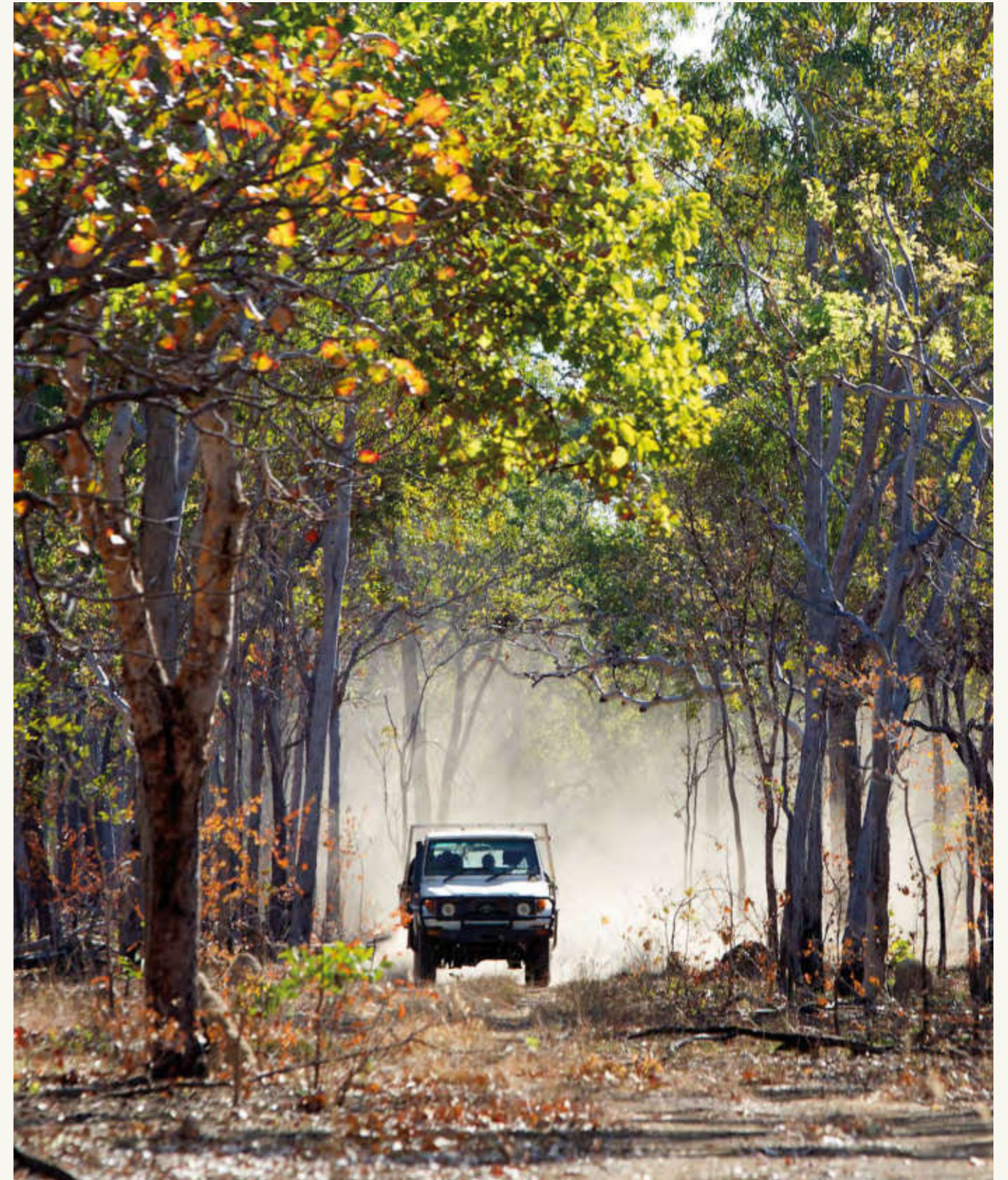
Continue to advocate for, and where necessary provide, improved services for members living at outstation communities within the Warddeken IPA

Maintain fortnightly food planes to all ranger bases and improve intervening food security services where possible

Continue to provide full-time education at Kabulwarnamyo, Mamardawerre and Manmoyi outstation communities

Develop and implement a Firefighting Operational Guide detailing protocols of on-ground work and procedures for protecting staff health and sustainability during prolonged wildfire suppression campaigns, which are likely to increase as climate change progresses

On a regular basis, cull pigs at wetlands most commonly used for food resources around ranger bases, including on-ground monitored wetlands



This is my country.

**This is where I recognise myself.
I have a responsibility to manage
it now and into the future.'**

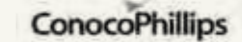
— Andrew Maralngurra





THANK YOU TO OUR SUPPORTERS AND PARTNERS

Sharing Warddeken's path toward our vision are our partners and supporters, who we thank for their continued support.





ETHER—
—LOOKING
—AFTER COUNTRY TOGETHER—

—NGARRIDJARRKBOLKNAHMAN KUNRED—
—NGARRIDJARRKBOLKNAHMAN KUNRED—
—NGARRIDJARRKBOLKNAHMAN KUNRED—

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